

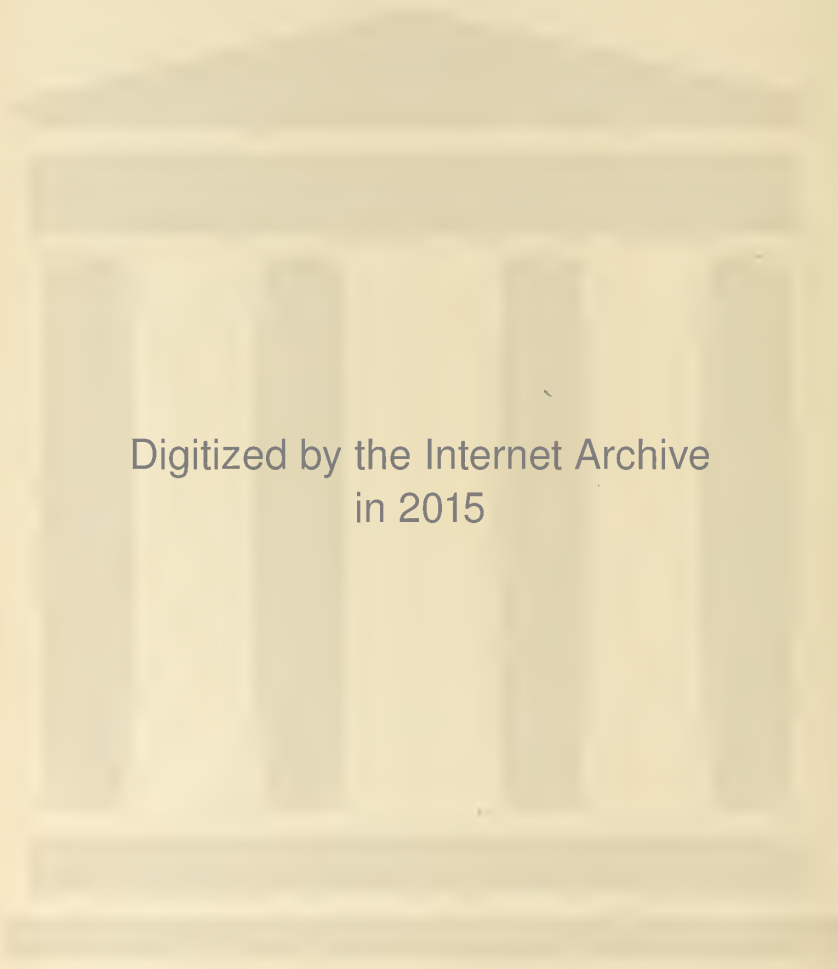
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THE
ILLINOIS MEDICAL JOURNAL

CONTAINING

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State Medical Society and the
Papers Read

AT THE

MEETING AT ROCK ISLAND, MAY 16, 17 AND 18, 1905

AND THE

PROCEEDINGS OF THE AFFILIATED SOCIETIES, TOGETHER WITH EDITORIAL
DISCUSSIONS AND ITEMS OF INTEREST TO THE
PRACTITIONERS OF ILLINOIS.

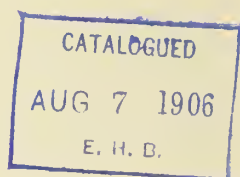
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BY

GEORGE N. KREIDER, A. M., M. D.

VOLUME VII
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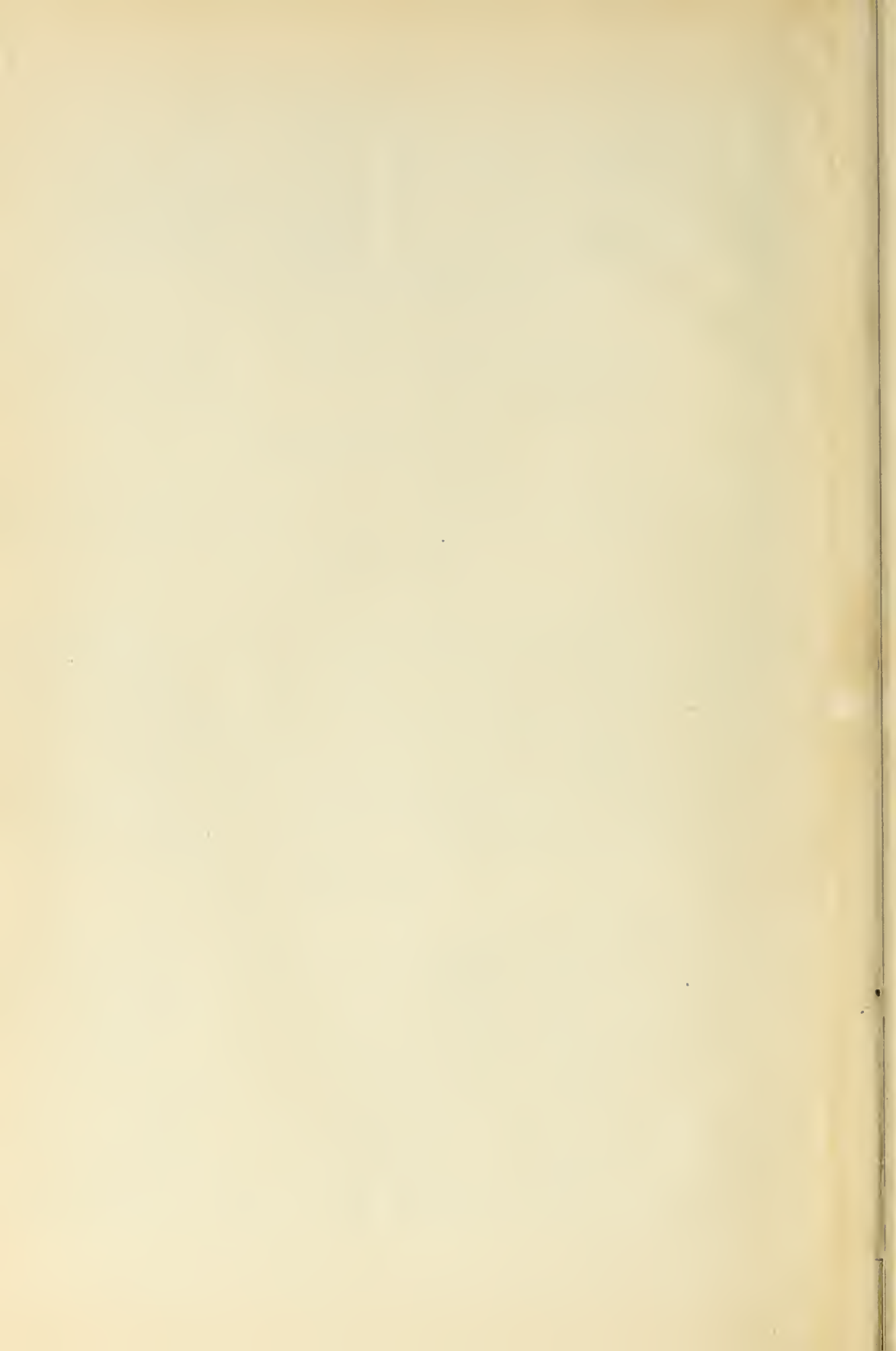
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MODIFICATION OF THE PORRO OPERATION.*

BY CARL WAGNER, M. D., CHICAGO.

My modification of the Porro operation means reversing the two steps of the operation, and consists in the reduction of the two distinct operations, namely, (1) Cesarean section and (2) the supra-cervical amputation of the uterus, into one operation of amputation of the intact pregnant organ, with everything left *in situ*, as far as the mother is concerned. Or, in other words, in the original Porro the fetus is first delivered by Cesarean section, and then the uterus amputated, consequently both operations performed in the abdominal wound of the mother, while in my modification the amputation is the only operation done on the mother. The delivery of the uterus is an act of its own, done at another table by other hands, and thus not interfering with the operation done on the mother, nor consuming extra time on the patient under anesthesia. Another feature of my modification relates to the technique. Instead of placing a rubber tube constrictor around the supra-cervical segment of the uterus, and tying the uterine arteries before the amputation takes place, we simply grasp with the left hand from behind and compress firmly the cervical segment, which itself is elongated and made thinner through lifting up and traction of the uterus by the hands of the assistant. In this way we constrict very reliably the cervical segment, and control hemorrhage absolutely, as our experience showed. The slipping of the stump out of the grasp of the hand is guarded against by four forceps inserted into the wall of the uterus at four different diagonal and rectangle points above the constricting hand; placing the hand and the forceps in position consumes one minute,

and the amputation another. The technique of my amputation proper is as follows:

1. An opening is made with the knife in a transverse direction right above one of the forceps.

2. Two fingers of the assistant are introduced into this opening from above downwards and inwards, the volar aspect of the hand being in contact with the uterus, in such a way as to enable him to hold back and upwards the contents of the uterus, in order to prevent them from prolapsing, or being injured during the following steps of the operation.

3. The amputation is completed with quick heavy strokes of the curved scissors held at such an angle as to form a conical shape of the stump.

4. The absolutely dry stump still in the firm grasp of the hand is rapidly sewed up, the first running sutures comprising the uterine arteries, the lumen of which can be seen very readily. The reason for not ligating the uterine arteries beforehand lies in the fact that we thus entertain the circulation and nutrition for the child as long as it is possible.

5. The uterus, which is quickly removed from the field of operation after ablation, is delivered by other hands on a different table, on which everything is in readiness to act as promptly as possible, consequently the time consumed from the moment the circulation is interrupted with the grasp of the constricting hand until the delivery amounts to only something over two minutes. This is the only time during which the fetus is in danger of asphyxiation, which means considerably less than in the original Porro.

I have operated in one year three times under absolutely different circumstances and indications on very grave cases, with no mortality, and not even symptoms of shock, and in the two cases where the fetus was alive,

*Read at the 54th Annual Meeting, May 17, 1904.

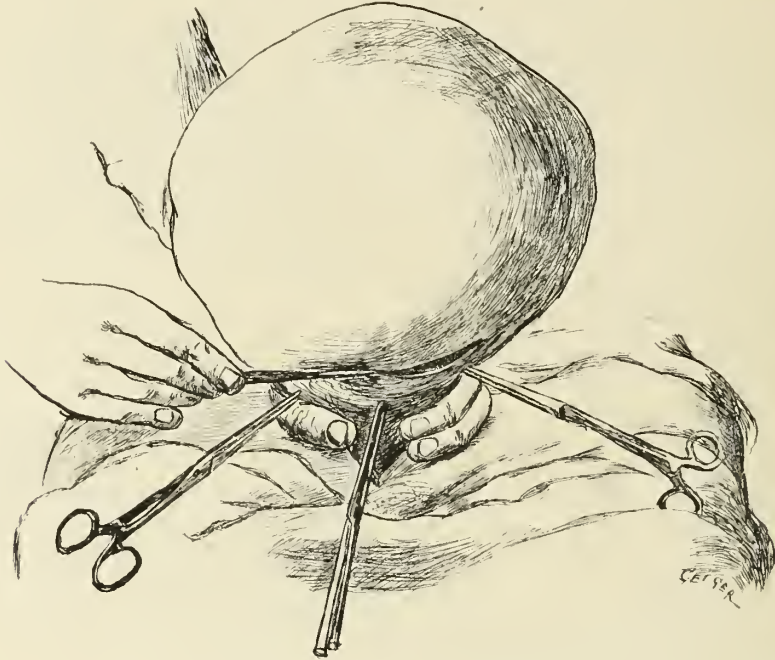
before the operation, the fetus was delivered alive.

Another extirpation of the pregnant organ, with everything *in situ*, was successfully performed since by Professor J. Clarence Webster, in the sixth month of pregnancy.

The three cases were reported at a meeting of the Chicago Gynecological Society, and published in the American Journal of Obstetrics and Diseases of Women, Vol. XLVII,

followed by very great malaise, and did not feel any more movements of the child. In the course of a few weeks the chills became more frequent and the condition of the patient grew alarming, so that the family physician, Dr. Kreye, was summoned. I saw the case two days previous to the operation.

Status Presens.—A fairly strongly built woman of German-American parentage, with a sallow, feverish aspect. Mammæ, which



Author's modified porro operation.

No. 2, 1903, and Vol XLIX, No. 2, 1904, and are as follows:

According to the literature, this is the first time that this operation has been performed.

Case I. Mrs. R., 36 years of age, with a negative family history, had been pregnant fifteen times previously, giving birth to nine children, and aborting six times. Her last child was born three years ago, and her last abortion occurred one and a half years ago. She had never had any gynecological treatment. She had never been ailing. Nine months ago her periodical flow ceased; the course of pregnancy went on without any disturbance until about five or six weeks ago, when the patient experienced a severe chill,

had been larger, according to her own statement, previous to the first chill, had gradually fallen away; no colostrum in the nipples; abdomen quite large, as at full term of pregnancy; labia not very edematous or varicose. Temperature 101° , pulse 110. Tongue coated. Labor pains had been present for eight hours. Physical examination revealed a uterus in size like one at full term, and a hard tumor connected with its lower segment. This tumor extended about four inches above the symphysis, and bilaterally to the inguinal rings. Vaginally I felt a solid, hard, round mass, completely filling out the upper vaginal vault, with an opening in the centre corresponding to the location of the cervical canal. This tumor

could be moved with the one felt above the symphysis and the pregnant uterus, all appearing to be a single mass. No fetal heart tones; no maternal bruit.

We concurred in the diagnosis of pregnancy at full term complicated by a fibroid tumor of the cervix blocking the whole pelvic cavity and invading extensively the lower segment of the uterus. Secondly, a dead fetus, because of the absence of fetal heart tones; absence of maternal bruit; the occurrence of chills and malaise, which set in contemporaneously with the cessation of the child's movements; the sudden falling away

and adhesion of the latter to loops of intestines, besides an encroachment upon both of the ureters.

During the operation no difficulties presented themselves until we reached the vesical and ureteral regions. The bladder had been drawn up to the fundal termination of the tumor and had to be dissected off, which proved to be a very tedious task. Laterally the tumor had encroached badly upon the ureters, so that on the right side the ureter was denuded to the distance of an inch and a half, while that on the left side had to be dissected out of the tumor to the extent of

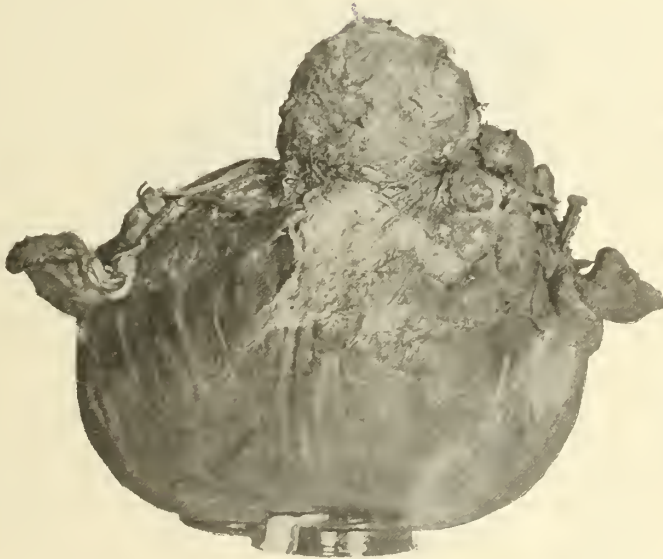


FIG. 1.—Uterus with fibroid of cervix extirpated during labor at term.

of the mammae, the fever and the labor pains, which had commenced in the morning of that day. Examination under anesthesia next morning corroborated this diagnosis.

Extirpation of the uterus with everything *in situ* was performed in preference to Porro operation or Cesarean section on account of the condition of the uterus, the child being dead, the placenta macerated, and the liquor amnii decomposed, thus inviting infection of the peritoneal cavity during Cesarean section preliminary to hysterectomy. Enucleation of the tumor by the vaginal route was impossible on account of its size and location, invasion of the lower segment of the uterus,

two inches. Of course there was reason to fear necrosis of the denuded parts of the ureters. However, nothing supervened. Posteriorly a conglomeration of six loops of intestines had formed a strong, band-like adhesion to the tumor. This was readily freed and ligated. The intact uterus and appendages, including the tumor, were then conically excised out of the cervix, and the cervical canal cauterized with the ferrum candens. One continuous row of sutures brought the corresponding muscular tissues in apposition and closed the canal. Another row of continued sutures adapted the serous layers on top of the stump, and, passing over both

sides of the cut edges of the broad ligament, gathered these upon the lateral ends of the stump.

A heavy silk thread was then carried antero-posteriorly through the stump, knotted at the ends, and left long enough to be rolled around a Maydl's gauze bridge which rested transversely across the lower wound edges. This suture is used as a guy rope, and only cut and pulled out at the time when the external wound of the abdominal incision is almost healed. I practice this in all cases where Mikulicz drainage is employed. The advantages which we secure by this procedure are as follows:

1. This silk suture enables us to draw the stump into close approximation with the anterior abdominal wall, so that we can insert the Mikulicz drainage very easily. This is placed somewhat posteriorly to the stump, between the omentum and stump, after the omentum has been drawn accurately over the intestines and made to descend in the pelvis.

2. By holding on to this thread the stump is prevented from falling backward upon the rectum to become adherent there, as well as to loops of intestines which might wander underneath the stump in the pelvis.

3. We produce an abdominal fixation of the stump just as in a regular hysterectomy, as through the constant contact with the anterior parietal peritoneum it will form a solid adhesion.

4. In case of secondary hemorrhage we can easily tampon against the bleeding stump as we have a good, solid body of it, or, if necessary to search after reopening the wound, it affords great facilities for finding the bleeding blood vessel, as we have with this guy rope a reliable landmark.

5. In case of infection of the stump, the superior posterior part of it is extraperitoneal and lessens the danger of involving the peritoneal cavity.

There is one more point I wish to dwell upon, and that is the question of control of the hemorrhage which has so often proved fatal in these extensive operations. Repeatedly before, and very clearly in this case, I demonstrated to those present that enor-

mously enlarged blood vessels can be dealt with very simply by bearing in mind that when stretching the tissues by means of traction on the tumor and uterus in certain directions, the lumina of the severed blood vessels contained in them do not discharge any blood whatsoever, but the moment one relaxes this traction a tremendous hemorrhage ensues. Very little blood was lost in our case, as the recorded pulse on the history sheet shows. No symptoms of shock followed. The closure of the abdominal wound in such extensive cases, where there is a likelihood of shock following, is reduced to the simplest kind, namely, through-and-through sutures with heavy silk, while the corresponding tissues are held in accurate apposition by Kocher's forceps. The course of the convalescence was absolutely uninterrupted; patient left the hospital seventeen days after operation, in perfect health.

Pathologist's report by Dr. Herzog.—The tumor has the histological features of a typical uterine fibromyoma. It presents, however, the following special points: Most of the non-striated muscle fibres of the tumor tissue are unusually large; they have evidently, during the course of the pregnancy, taken part in the same hyperplastic processes to which the uterine muscularis is normally subjected in gestation. The tumor is quite vascular and contains more or less necrotic tissue.

Case II and III. The first of the two operations was performed on account of an inoperable carcinoma of the cervix of the uterus in the seventh month of pregnancy. The frail patient, a woman thirty-six years of age, always lived in very straitened circumstances, working hard for a living, and gave birth to four children. Never was seriously ill, complaining only of leucorrhea since she gave birth to children. Three and a half months previous to the operation I examined her vaginally on account of a profuse hemorrhage, and found a carcinoma of the cervix as the cause. The malignant growth had acquired great dimensions, extending into the wall of the vagina, and causing great pain in bladder and rectum.

Pregnancy of three months was detected. Application of the *ferrum candens* to the cauliflower-shaped carcinoma arrested hemorrhage and also had a very alleviating influence upon the distress of rectum and bladder. During the following three months she was attended off and on in an ambulatory way at the hospital, the treatment consisting in an antiseptic dressing of the ulcerated malignant growth. At six and a half months of pregnancy, labor pains set in very vehemently. Liquor amnii and blood passed for two days continuously, and the patient failed

with Syms' speculum, coincided with me in regard to the measure to be taken. The operation consumed seventeen minutes. The amputated uterus was opened by Dr. Holmes, the fetus extracted and, being alive, was put in a warm water bath. It lived two hours. The mother made an uneventful recovery, and it is to be noted that since the operation was performed the malignant growth is spreading very much more slowly, though the patient represents now, some five months after the operation, the characteristic clinical picture of carcinomatous cachexia.



FIG. 2.—Pregnant uterus with fibroid of cervix extirpated at term.

very rapidly. Size and location of malignant tumor neither allowed natural delivery nor admitted of vaginal Cesarean section. Calculating that in a short time the whole uterus would be the prey of the fast progressing cancer, abdominal excision of the uterus, with everything *in situ*, was decided upon. Abdominal Cesarean section was thought inadvisable also because the uterus left behind, with ulcerations at the carcinomatous cervix, would surely cause the patient to succumb to puerperal fever. Dr. Holmes, who, at the time of the operation examined the case, and Dr. C. S. Bacon, who also inspected the malignant growth, when I had exposed it

The second case concerns a woman thirty-nine years of age, who gave birth to six children. Two weeks before the delivery of the first baby she fell down a flight of stairs, which she holds responsible for a still-birth. Two children died of scarlet fever; three are alive. The middle of June, a year ago, I saw the patient for the first time. She had then been in bed two months, and was treated by a hydropath for heart disease, which she did not have. She was very emaciated; had great pains in the distended abdomen, which was very hard and tumified in the left inguinal region; temperature, 102°; vaginally, an extensive cervical laceration.

tion to the left, and a hard mass in the left parametrium and cul-de-sac were found. Constipation and pressure upon the bladder made the patient suffer very much. Curettage, mending the cervix, abdominal removal of pus and exudate mass, freeing the retroflexed uterus from adhesions which bound it down to the rectum, raising the uterus, putting it in contact with the parietal peritoneum, retaining it there by Miculiez drainage placed behind it, corrected her ailments and allowed the woman to take up her household duties again, after three and a half weeks. Six months after operation, in good health, she conceived again. Pregnancy went on apparently normally; during the last four months of her pregnancy, previous to full term, typhoid fever haunted the whole family. Her three children were stricken down in succession with severe forms of typhoid, and one of the children, before it had typhoid, underwent an operation for appendicitis. She was left absolutely alone to take care of these children. Before the last one of the children recovered from its attack of typhoid she developed a serious form of typhoid herself. Seven hard weeks of suffering followed. During this illness I was sent for a number of times, day and night, on account of these supposed labor pains. There seemed to be slight contractions of the uterus, which caused a very intense pain exactly in the median line, extending from a point about an inch and a half below the umbilicus into the vagina. Vaginal examination elicited a point corresponding to the internal os as the most sensitive one. Through the thin abdominal wall a hard and rigid tissue could be felt, quite different from the soft condition of the uterus. My contention was that an abnormally strong adhesion band had formed at the place where the uterus was held in apposition with the parietal peritoneum after the operation a year ago. I further contended that this suspension interfered painfully with the motion of the uterus, and the physiological hyperplastic expansion of the uterus. As the time of labor approached I repeatedly proposed to the family to have her removed to the hospital, explain-

ing to them that I anticipated serious complications for the following reasons: First, on account of the bearing which the effects of her former illness and operation of the year previous would have on this labor; secondly, because her surroundings were quite inadequate for complications of labor; and, thirdly, because only the best hospital care could come in consideration for a woman so frightfully debilitated through all the troubles and cares incident to the typhoid of her children, and her struggles between life and death during her own typhoid at the eve of delivery.

But she insisted upon remaining at home to take her chances in waiting, as she labored under a presentiment that she could not live, anyway. After the third day she became so weak that she could not leave her bed. At the seventh day of labor, chills, nausea, and fever of $102\frac{1}{2}^{\circ}$ set in. It was then that she herself asked to be taken to the hospital. She entered that night the Passavant Hospital, where Dr. Holmes saw her, with me, shortly after, in consultation. We decided upon abdominal hysterectomy, for the following reasons: First, the undilated cervix remained retracted so far up and held in position there by strong adhesion bands that delivery in the natural way could not be expected; second, for the same reasons *accouchement forcé*, or Dührssen's incisions and application of Tarnier's forceps was out of the question; third, for the same reason, a vaginal Cesarean section could not come into consideration; fourth, neither would abdominal Cesarean section have been the proper procedure, as it would have left a uterus behind that was (a) potentially infected, and cause the patient to succumb afterward from puerperal sepsis; (b) full of raw surfaces at the places where adhesions were severed which would give rise to formation of new and more serious adhesions; (c) which, during the course of contraction and traction upon the adhesions to the intestines, cause kinking of the bowels, and serious obstructions; (d) which might give rise to fatal hemorrhage on account of the adhesions preventing the uterus from complete

enough contraction: fifth, Porro operation consumes more time, involves greater dangers, from the point of view of hemorrhage, with absolutely the same material effect. At the eighth day, in the morning, the operation was performed, the condition of the patient not having changed any over night. The incision was comparatively small, not extending beyond the lower margin of the umbilicus. Adhesions were immediately encountered all over the uterus. The heavy band which had formed at the anterior part of the uterus presented the greatest point of interest and explained very readily why the cervix could not descend farther down into the vagina. The size of this band was two inches in width, and three-quarters of an inch in thickness, with good sized blood vessels contained in it. It had produced an almost rectangular kink of the uterus in the region of the lower segment, and internal os; to some extent, through lateral fibers constricting this part of the segment, and also having an influence upon the direction of the cervix; namely, directly backward. It seemed clear that the head of the child could not engage properly in the parturient canal. This band was tied off in two sections with double ligatures and severed. Immediately the kinked uterus straightened out, the release allowing a distension of from four to five inches, but even then the uterus could not be developed out of the abdominal cavity until a number of heavy adhesion bands leading to the bowels and omentum, broad ligament, etc., had been dissected off. The next step consisted in tying the ovarian artery and quickly stripping down the side of the uterus, the broad ligament. Instead of proceeding as usual, by tying off the uterine artery on both sides and then forming a cuff which must be caught with hemostats, as the knife is carried around the uterus, and sometimes necessitating many forceps by the time the amputation is completed, and frequently accompanied by very great hemorrhage, it occurred to me that with the introduction of a very simple feature, work could be very much facilitated, time saved, and absolute control of hemorrhage insured. While the

assistants lifted up the uterus with some traction, I grasped the elongated cervix with my left hand, from behind very firmly, compressing it tightly; then I placed four forceps, one on each side, and one in front, and one posteriorly, right over my hand in the tissue of the uterus. Those forceps were inserted there for the purpose of serving, first, as a landmark for the incision; second, as levers to lift up the stump with after amputation, if necessary, or to prevent the stump from slipping out of my hand. With the scissors held in a slanting position, the outer blade higher than the inner, I amputated the uterus with a few sweeping, heavy strokes, while the assistant, the moment the uterus was opened, introduced his finger to hold back the head and membranes. By holding the scissors in this position, and keeping the blade inside of the uterus, in careful contact with the mucous membrane of the uterus, I first averted injury of the head and membranes; secondly, I had a conically-formed stump which allowed a very easy adaptation. This whole procedure took one minute, a fact which is of the highest importance for the life of the baby. The closing up of the stump was a very easy task, then, as I held it still firmly and conveniently for work in my hands. It was absolutely bloodless. In the meanwhile, Dr. Herbst and Dr. Hooper delivered the amputated uterus, and reported that the child, which weighed nine pounds, was in the best condition possible, announcing its existence by a good, normal cry. The mother did not show any symptoms of shock, made an uneventful recovery, and left the hospital in twenty days. Thus, this modification of Porro's operation has proved, in my hands, a safer and simpler procedure than the statistics of the original Porro operation show, and, with the introduction of the new feature mentioned above, the operation has been reduced to a minimum consumption of time and loss of blood.

Three cases with absolutely different complications show no mortality from the operation, and in the two cases where the fetus was alive before the operation, it was delivered alive.

CONCLUSIONS.

1. The original Porro is a longer and more complicated operation, on account of the preliminary Cesarean section.

2. In the original Porro there are greater dangers of infection involved, as all manipulations of the Cesarean section and delivery of the child are performed at the abdominal wound.

3. The life of the fetus is more jeopardized through asphyxiation on account of longer constriction of the uterus with the rubber constriction.

4. The application of the rubber tube constrictor consumes greater time than the grasp of the hand; the rubber constrictor is not absolutely reliable and has slipped in a number of cases, giving rise to fatal hemorrhage.

5. My modification of the Porro operation reduces the operation in as far as the mother is concerned to one single operation, a mere hysterectomy.

6. The grasp of the hand around the cervical segment of the uterus renders the operation almost bloodless, and facilitates the completion of the operation after amputation very greatly.

7. Postponing the ligation of the uterine arteries until after amputation of the uterus insures the life of the fetus against asphyxiation as long as possible.

8. The time consumed during which circulation is shut off and delivery of fetus is reduced to a minimum of two minutes and a half.

9. The completion of the operation is in no way interfered with by the delivery of the fetus, as this act takes place at another table, and performed by the assistants.

10. While the original Porro operation has at all times shown frightful mortality, there has been absolutely none with this modification.

Discussion on the Paper of Dr. Wagner.

Dr. Rudolph W. Holmes, of Chicago.—Mr. President: I was present at the second operation performed by Dr. Wagner, and also assisted in the third. After the third operation we went over the question of hysterectomy in late

pregnancy and labor, and I told him that I thought the procedure carried out in the second operation was the better one, because if the woman is in late pregnancy, for instance, with the hand grasping the cervix and lower uterine segment, it means a high amputation of the uterus; when a hysterectomy of a puerperal uterus is done generally as much of the cervix as possible should be removed.

There are three principal indications for the removal of the uterus in pregnancy and labor. First, infected uterus; or where we are in doubt as to whether there is infection or not from the manipulations of the unclean attendant, as a midwife, it is advisable to remove the uterus. Second, in carcinoma, and, third, in rupture of the uterus.

If you are going to remove the uterus, the best thing to do is to remove all you possibly can in these cases of infected uterus, making a complete hysterectomy. A German obstetrician removed a uterus in labor for ante-partum infection; he did supravaginal amputation. The uterus removed was subjected to examination and found sterile. Cultures taken from the cervix produced a prolific growth of germs. He had removed the non-infected portion of the uterus, left the infected, and the woman died. In carcinoma of the uterus complete hysterectomy should be carried out whenever possible. In rupture of the uterus one may consider the case potentially infected, and therefore it should be removed *in toto*.

One case does not prove the rule; the third case is the only one which offers any possible data for making conclusions, for the woman was at term, and a living child was borne. A baby in utero can live some moments after the systemic circulation is cut off because there is considerable blood in the placenta and uterus which will supply sufficient aerated blood to the child to keep it alive. This was proven in the third case. I do not think the second case is a good criterion of the possibilities of Wagner's procedure for the child was too premature to receive consideration, for it is known that a premature baby will live under adverse circumstances for a few moments without aeration of the blood—in a state of apnea, but it is a technical error to produce these adverse circumstances where a viable child is at stake.

Under these conditions I believe the removal of the uterus unopened is justifiable; when the child is positively dead; when an absolute indication for caesarean section exists, when an indication for hysterectomy is present—i. e., when intra-partum infection is surely present. Caesarean section is so very rarely justifiable with a dead baby that Wagner's procedure will seldom be indicated. Further, I believe the grasp of the hand about the lower uterine segment is a distinct impediment to a proper, full amputation of the uterus, so should not be done; a far preferable course is using the techniques of the classic hysterectomy of the non-pregnant uterus. I believe Dr. Wagner should be satisfied with the knowledge of being the first to remove, intact, the full time uterus,

and not try to introduce a new operative technique which has so many obstetric objections.

Dr. Wagner (closing the discussion.)—The same question which Dr. Holmes put in regard to preliminary ligation of the uterine artery was asked by Dr. Banga, who said at the time he heard my paper before a meeting of the Chicago Gynecological Society, that he did not understand me correctly. I did not tie the uterine arteries beforehand, for the reason that tying them beforehand consumes time, and in all cases in which the uterus has been removed, it shows that the course taken was a satisfactory one. Besides, when we have the stump in hand, we see the lumen of these two arteries, distinctly. They were simply embraced in the running sutures, which closes the stump.

EXHIBITION OF CASES.

BY HUGH T. PATRICK, M. D.

DR. PATRICK said: Mr. President.—I hope you will excuse me if I should present these cases too rapidly. After the subject was given to the Secretary, several other patients turned up, who fitted in so nicely with the ones announced, that I added them to the list. So I shall be very brief with each one.

1. IDIOPATHIC MUSCULAR ATROPHY.

The first patient is a young woman, twenty years of age, whose troubles, so far as she knows, began at the age of twelve. But she has never been able to close the eyes tightly. This is of considerable importance because in some of these cases, long before the disease shows itself, there is inability to close the eyes properly. Neither has she ever been able to whistle or pucker the lips normally. (Patient tries to whistle but fails to do so.) She says this is no worse now than it was when she was a child. The first thing noticed of the present progressive trouble was that at the age of twelve she began to walk in a peculiar way; with the shoulders thrown far back. Please notice the marked lordosis, characteristic of the affection. It is due to weakness of the muscles of the back and of the gluteals. The case is one of idiopathic muscular atrophy, muscular dystrophy, myopathy.

It shows very well a peculiarity which belongs to the muscular dystrophies, in contradistinction to progressive muscular atrophy of the spinal type; namely, marked atrophy of the upper arm, with forearm and hand practically intact. In the spinal type the trouble begins in the small hand muscles and before long invades the forearm. Although the deltoids in this case are large and hard, they are very weak. She shows here a condition which occurs in the calves in another form of muscular dystrophy; namely, pseudo-hypertrophy. There is a disappearance of a large part of the sternocleidomastoid muscles, and the scapulae are "winged," owing to paralysis of the serratus and other scapular muscles. This case, then, corresponds with the facio-scapulo-humeral type of Landouzy-Dejerine. But she has, further, involvement of the gluteal muscles and of the pelvo-femoral group in front; that is, the psoas and iliacus, whereas the muscles in the lower legs are good but not perfect. She can stand on her toes without any trouble, but she cannot raise her toes so as to stand on the heels. It is a muscular dystrophy case; it is atypical in distribution, in that it partakes of many of the different types. There is the upper arm type, the pelvic girdle type, and the facio-scapulo-humeral type, and her case partakes of all these varieties.

The knee jerks had almost entirely disappeared when she was admitted to the hospital, but under large doses of strychnia they became distinct, so that now they are normal. She is receiving at present 1/10 grain of nitrate of strychnia, twice a day, without trouble.

Of course the only thing to be differentiated from this is progressive muscular atrophy of the spinal type, which begins in the small hand muscles; whereas in this trouble the hand muscles are nearly the last to be involved. The spinal type, which is a progressive degeneration and disappearance of the large motor cells in the anterior horns of the spinal cord, next attacks the deltoids, as a rule, and involves the legs later. There are other differential signs which I will not take the time to mention. I simply want

*Read at a meeting of the Chicago Medical Society, Nov., 1904.

to show the patient because these cases are not so very frequent.

2. MULTIPLE NEURITIS.

The next case is one of multiple neuritis with several complicating elements. I saw her for the first time a few days ago but she was admitted to the hospital (Wesley) last March. The first thing that struck me, when I looked over the history-sheet, was the report of the blood examination which showed only 35 per cent. hemoglobin. With this low per centage of hemoglobin, I began to think of combined degeneration of the cord. In the beginning these cases are sometimes taken for multiple neuritis. It has been known for a long time that in pernicious anemia, as in ergotism and pellagra, there are sometimes certain degenerations of the spinal cord. We now know that in simple anemia, or even when there is no anemia at all, the same sort of degeneration may occur. It is limited to the posterior and lateral parts of the cord. It may begin in the lateral tracts, and then we have the symptom-complex of spastic paraplegia. Or it may begin in the posterior columns, and then we have symptoms like those of tabes; that is, incoordination, with sensory signs, numbness, formication, anesthesia, analgesia, according to the location and severity of the trouble. Generally the process begins at about the same time in lateral and posterior columns and the clinical picture is that of ataxic paraplegia. These cases in the beginning may present a picture very like multiple neuritis, but not so rapid. The patient complains ordinarily of numbness in the feet and hands and tingling. There may be difficulty in controlling the legs; they are clumsy and weak.

This lady began two years ago to feel weak; digestion and appetite were poor. She gradually grew worse and worse, weaker and weaker; she was short of breath; she had a good deal of palpitation; a considerable dragging pain in the back. She had what might be taken for a girdle feeling around the lower part of the abdomen, and trouble in passing her urine. At the same time, she developed this numbness and had more or

less sharp pain in the legs and knees. She came into the hospital last March in a perfectly useless condition. She could not feed herself: she could not stand very well; her blood showed 35 per cent. hemoglobin; red cells 2,600,000, white cells normal.

At that time the diagnosis would have been a good deal more difficult than it is now. Since that time she has materially improved. She was found to have gastritis; she received treatment for it. She was found to have complete procidentia uteri, which, in June, was rectified by an operation, and after that she improved more rapidly so that for the last month or more her blood has shown 80 per cent of hemoglobin and red cells nearly 4,000,000.

The question arose as to whether she had combined degeneration of the cord, the prognosis of which is bad, or multiple neuritis, the prognosis of which is good. That she had marked incoordination was accidentally discovered about two months ago. In addition it was then noted that she complained of numbness in legs and hands, had also complained of a tight feeling about the lower abdomen and had difficulty in voiding the urine. Examination revealed absence of the deep reflexes, very considerable paresis, worse in the lower extremities, but no analgesia or anesthesia. Ataxia in arms and legs was marked. The normal pupils, absence of lancinating pains and objective sensory trouble with presence of pronounced weakness excluded tabes. I think the procidentia accounts for the bladder trouble and the discomfort low down in the abdomen. In combined degeneration of the cord there is very little pain, while she suffered a good deal of pain like that of multiple neuritis. In combined degeneration the knee jerks are generally exaggerated, except toward the end: here they are lost and in this patient there is muscular tenderness which is present in multiple neuritis, absent in cord disease. Inquiry elicited the fact that within three or four days she had passed from a condition in which she could walk several blocks into one in which she could not walk or even stand upon her feet. That is very much more like multiple neuritis than combined

degeneration, which is very gradually progressive. I consider the case to be one of multiple neuritis grafted upon severe anemia. She has still a very considerable amount of ataxia. She has a good deal of weakness. She walks very much like a tabetic and she has marked impairment of the sense of movement. That is, with the eyes closed she cannot tell exactly where an extremity is. The case, then, is one of multiple neuritis of the type of pseudo-tabes in which the incoordination comes prominently to the front; but there is also a great deal of weakness. Having made a diagnosis of multiple neuritis, the prognosis is good as regards life, and very fair as regards recovery. I say very fair because, although, as I stated, it is a case of multiple neuritis, she may not get well completely. I shall presently show another case to illustrate the fact that multiple neuritis does not always carry a favorable prognosis.

3. ACROPARESTHESIA NOCTURNA.

This young lady is twenty-three years of age. From her general appearance, tall and slender and pale, one would scarcely pick her out for a very hardy individual; yet she is a hard worker even if not vigorous. She has a trouble that occurs in just such an individual, as well as from other causes, which I shall mention presently. She has had this trouble for two years. It is nocturnal palsy, night numbness or acroparesthesia nocturna. She is not troubled during the day. She does housework of all kinds, including sewing and rough work, and goes to bed tired out. In the night she awakens with numbness and tingling which is so intense as to be really a pain. It is always in the right arm. The tingling is so intense that her arm is paralyzed. She cannot use it. She gets out of bed, rubs the arm, fusses around, puts it in hot water, shakes it, and the tingling disappears, after which she goes back to bed. As a rule, the trouble comes only once in the night and never during the day unless she goes to sleep.

Examination shows absolutely nothing. But that is not always the case. The disturbance occurs in Bright's disease and in diabetes; in cases of arterio-sclerosis, in per-

nicious and simple anemia, and sometimes it is the forerunner of an apoplectic attack. Weir Mitchell relates a very striking case of a patient with this trouble who consulted a doctor who himself had the functional type, and pooh-poohed the complaint. Soon after, the patient got a complete hemiplegia from thrombosis. So it is sometimes an indication of very grave organic disease, whether it be arterial or some other organic disease of the nervous system, or whether it be in the nature of a toxemia or diathetic trouble. It is necessary to examine for all possible sources or organic origin. A good many of these cases occur at the menopause and in these the prognosis is good. The trouble often occurs in patients, as in this young lady, who are not very well nourished, and not very vigorous; the kind that are apt to get occupation neuroses. Sometimes it is impossible to discover an adequate cause for the complaint. In the majority of cases it is of importance not because it is serious, but because the patients are so frightened, fearing permanent paralysis.

The menopause cases recover on bromide. It keeps them comfortable until the change has passed. Many of the simply nervous cases are also relieved by bromides.

4. CERVICAL RIB.

The patient before you was sent to me two weeks ago. She is twenty years of age, and for the last four years she has had numbness, pain, discomfort, etc., in her left arm, not worse at night, but sometimes she has it at night. But in this case results of examination are not negative. The upper arm and forearm are one quarter of an inch smaller on the left side than on the right, and the hand is one-half inch smaller. There is marked atrophy of the small hand muscles and the beginning of claw-hand. You will notice that the fingers are flexed in the distal phalanges and she cannot straighten them when the hand is extended. There is partial reaction of degeneration in the atrophic muscles. When I saw her first and glanced at the hand I thought at once of syringomyelia; but I was wrong, because sensation is perfectly normal, except along the inner border of the arm from the elbow to the

wrist where there is very slight anesthesia. The dissociation of syringomyelia is not present. Then I concluded it was a plexus affair. I examined her carefully and felt in the supraclavicular space a prominence which is not to be felt on the other side. I then made a provisional diagnosis of cervical rib; we had an X-Ray picture taken which shows it beautifully. A cervical rib is a rarity.

She has none of the sympathetic symptoms of plexus trouble. There is no marked difference in the palpebral fissure; there is no contraction of the pupil on that side, and no retraction of the eyeball. It is a plexus paralysis of the lower or Klumpke type, due to involvement of the sixth and seventh cervical roots and first dorsal. I hope to have her operated upon and the operation should cure her. (The rib has since been removed by Dr. W. E. Morgan.)

Doctor Eisendrath has recently written a paper on this subject in which he reported a case of cervical rib accidentally discovered; in fact, in most of the cases on record the cervical rib has been accidentally discovered either post-mortem or during an examination for other trouble, and the cases in which it has been found to be the cause of symptoms, and in which the diagnosis has been made before operation, are very limited. It is quite an unusual thing to have cervical rib with symptoms. Sometimes the symptoms are those due to pressure on the vessels more than on the plexus. But in this case there is no pressure on the subclavian, as the pulse on the two sides is equal and normal. But queerly enough, if the arms are raised, there is no pulse at the wrist felt on either side.

5. ARTHRITIC MUSCULAR ATROPHY.

The next case is one of muscular atrophy of an entirely different type. It is not, strictly speaking, a neurological case although in similar cases I have known a diagnosis to have been made of progressive muscular atrophy, syringomyelia, or multiple neuritis. The patient, about fifty years old, complains of pains in his arm and shoulder, in his ankles, knees and head; in other words, he has more or less transient, fugitive pains

which might lead one to think of multiple neuritis. The pain goes from place to place but is worse in the elbow and shoulder. You notice that the left arm between the elbow and shoulder is badly wasted. The elbow joint is stiff, enlarged, tender and grates on movement. He has arthritic atrophy. In this case, besides the atrophy, which is out of all proportion to the joint trouble, there are fibrillary twitchings in the muscles. This is very often misleading. The fact that there is a fibrillary twitching does not mean that the disease is necessarily central. He has an atrophy that is very much like the muscular dystrophy we have seen in that it affects the upper arm and leaves the forearm free. It is due entirely to the chronic, dry arthritis of the elbow.

Examination for symptoms of involvement of the nervous system is absolutely negative. There is no reaction of degeneration; and queerly enough, in these wasted muscles there is no diminution of the deep reflex; in fact, it is generally increased.

I have brought this patient here to emphasize a practical point often overlooked; namely, when there is muscular atrophy, keep in mind that it may be due to joint disease. This elbow looks as though it might be tubercular, but it is not. In some cases, where the arthritis is not so pronounced, there is still marked atrophy. In some cases there seems to be more or less neuritis, as there is involvement of the periarticular structures. But it does not give any of the signs of ordinary neuritis; the nerve trunks are not tender; there is no diminution of the deep reflex. When the joint trouble is general, as it is in some cases, this atrophy is very general. I remember very distinctly the case of a young man who was sent to me as a case of far advanced progressive muscular atrophy, but it was a case of multiple arthritis with great muscular wasting and he made a fairly good recovery.

6 and 7. MULTIPLE NEURITIS.

This is a beautiful case of multiple neuritis. If you listen you can hear his feet flop on the floor as he walks, and you can make a diagnosis of foot-drop from the sound. He has a very marked foot-drop.

This other patient, whom you see, is nearly well now. He walks fairly well with his eyes closed.

The trouble in both these men began about three years ago. The first patient suddenly felt a weakness in the right knee, and in a few hours the leg was weak and in a couple of days he was paralyzed hand and foot. This continued for months. The cause has never been definitely ascertained. The man himself thinks he was given arsenic with murderous intent and he says lead was found in the blood. I have not investigated that phase of the case. At any rate, the history of his having received arsenic is more than indefinite; it is without foundation so far as we know. However, he has a suspicion. Three weeks before the paralysis came on, he was quite sick for two or three weeks, during which he had extreme vomiting, pain in the belly and diarrhoea. What that was I do not know. It may have been due to arsenic; it may have been an acute infection of some kind; ptomaine poisoning, if you like. It does not make a bit of difference so far as multiple neuritis is concerned. Multiple neuritis, whether it be due to arsenic, lead, typhoid fever, diphtheria or alcohol, is always the result of a poison, and it is not, in the ordinary sense of the word, in inflammation. It is an acute neural degeneration.

I brought this patient here to illustrate how slow these cases are in progressing toward recovery. He went to work for the first time only a few days ago. He uses his hands pretty well, and is beginning to have a little bit of knee-jerk. He still has some foot-drop. He will go on improving for the next two or three years, but whether he will make a perfectly complete recovery or not, I do not know. I very much doubt it.

The other man presented a very similar clinical picture. Three years ago he was brought in totally paraplegic. His hands were so ataxic that he could not use them. He had multiple neuritis of the ataxic type very much like the woman I showed you first. He still has a considerable amount of ataxia:

his legs are weak, he has trouble in walking in the dark. At the time he came under observation the paralysis was so marked that the case looked very much as if it might have been a spinal cord case, a very bad one, one of these combined degenerations of the cord of which I have spoken. He was in bed four months, after which he got up, has been slowly improving ever since but has not yet recovered.

8. CAISSON DISEASE.

Here is another patient, a man with foot-drop and weakness in the legs. But this is not a case of multiple neuritis, although the external features are nearly the same. He is weaker in the legs than the other men but he has exactly the same motion of the feet. He can scarcely use his legs below the knee. With other men he was engaged in building a bridge across the Mississippi river, working in one of the caissons. He worked in this for four months, then quit it for three months, when one of his fellow-workmen said, "what is the use of your working up there for \$1.50 a day, when you can get \$3.75 down in the hole?" So he went into the hole. They happened to be working very deep, about seventy-five feet, and the pressure was thirty-five pounds to the square inch. He felt no inconvenience while working in the caisson, aside from pressure in the ears. When the men come out of the hole they enter a chamber where the compressed air is let out, and, as in all industrial enterprises, the welfare of the workmen is of secondary consequence. The air was let out too rapidly and this caused the caisson paralysis. There has not been a large bridge built necessitating the placing of very deep foundations for piers, without a number of cases of caisson disease. This disease, if proper precautions are taken, can always be avoided. After working in the caisson for four hours he passed through the air chamber just mentioned and then almost immediately began to feel tingling and numbness in his legs and they quickly became useless. The tingling was also felt in the arms, he lost consciousness and was unconscious all night. The next morning

his legs were completely paralyzed. He felt dazed and confused. The arms were all right. He soon cleared up mentally and the legs gradually improved for several months. Of late they have been at a standstill.

The pathology of this disease is pretty well settled. Long ago it was thought to be due to hemorrhages; but that has been found not to be the case. The lesion is multiple; there is a softening due to occlusion of the small blood vessels by bubbles of gas which escapes from the blood. Most of the cases have their lesions in the white matter. The lesion ought, by all rules, be in the grey matter. In this man's case both are involved but the grey more than the white, because he has very little tactile anesthesia. He can feel a light touch with the finger anywhere; but he has marked analgesia. You may stick him with a pin anywhere from the groin down, and he does not feel pain. He feels touch, but not pain. The softening in his case is mostly in the posterior horns, but in the anterior horns as well, because his paralyzed muscles are wasted and show reaction of degeneration. The prognosis as regards further recovery is not good. Such regeneration as was possible has already taken place.

9. TABES WITH HYSTERIA.

You will notice that the next patient walks slightly on the toes; his heels hardly come down; his toes turn in. He walks with extreme care. The best way to designate his gait is to say that it is a careful gait. This peculiar gait is caused by hysteria. All careful gaits not due to pain have hysteria as a basis. But that is not his real trouble. His disease is tabes. Although his pupils react to light, he has no knee-jerk; he has analgesia of the legs and trunk which is perfectly typical. He has lightening pains and distinct ataxia, and because of that ataxia he is afraid he will fall and something will happen to him. His gait, then, is hysterical, but he presents a combination of organic and functional disease, the second quickly curable, the first incurable.

ADVANTAGES OF THE SHORT INCISION IN IDEAL LAPAROTOMIES.*

BY BAYARD HOLMES, B. S., M. D., CHICAGO.

The surgical incision is made with two ends in view; (1) to secure drainage, and (2) to give access to protected parts. In the former instance there is every reason for a liberal gash, while in the latter case the wound must be closed again, and many reasons exist for an incision as short as possible. In the former case drainage must be adequate, and a longer incision will not detract from this end, while a shorter one is fatal to its purpose. In the latter case the cut must be long enough to reach the protected part, and if it is longer it only adds to the mutilation of the patient, and the disadvantages of closure.

There are obvious cosmetic reasons why a short incision should be made for neurectomy of the supraorbital, the infraorbital and the inferior dental nerves, but in the case of a laparotomy the same reasons do not hold except in young women, but they are replaced by reasons of much greater importance, of which I propose to speak. In ideal appendicectomy, cholecystotomy, herniotomy, cystostomy of the urinary bladder, and oophorectomy for an ovarian cystoma, all of them uncomplicated by uncertainty of diagnosis, an extremely short incision prevents at once the disfiguring scar, gives adequate access to the part, prevents waste of time in suture, shortens thereby the anesthetic, prevents the operation hernia, allows the patient an almost immediate erect posture, and shortens the stay in the hospital. All of these advantages encourage early and therefore safe operative procedure; increase the number of cases subject to operation, diminish greatly the number of years of suffering by the multitude of patients who are deterred from seeking surgical relief by the long period of confinement, the risk of hernia, and the disfiguring scar which a long incision entails. It often appears better to a man to suffer the inconvenience of wearing a truss rather than

*Read at a meeting of the Chicago Medical Society, Dec. 1901.

go to bed for five or six weeks with a five or six inch gash in his groin. It often appears better to a patient to endure the pain, nausea, vomiting, and occasional confinement of a cholecystitis rather than spend a month or two in the hospital with the slow healing of the severed muscles on the lateral half of the abdomen. It often appears better to a woman to endure for a time the inconvenience of a small ovarian cystoma rather than a long stay in the hospital and a subsequent ventral hernia. To old people a long stay in bed is not only a source of discomfort, but also a source of actual danger to life, and in them the short incision affords the only possibility of giving surgical relief.

In a paper read before the Chicago Surgical Society eight months ago I described my use of a short incision in ideal appendicectomy, and recounted the results of this procedure in my hands. In the average individual the cut is not more than an inch and a quarter long, the time of the appendicectomy is not more than fifteen minutes. The patient is anesthetized upon the operating table with gas and ether, or with chloroform. The wound is closed with three layers of stitches; a continuous catgut suture in the peritoneum, two or three interrupted catgut stitches in the fascia, and one or two silk-worm-gut stitches in the skin. The patient remains in bed only so long as he feels like it, sometimes an hour or two and sometimes until next morning. The pain in the abdominal wall is trifling, and most pronounced in laughing; vomiting after the operation is relatively rare and never persistent. The erect posture and the freedom of the hospital takes away a large part of the inconvenience, which wears upon many patients after abdominal operations. In the ideal operation there is no danger of hernia, no fear of hemorrhage, and no dangers connected with the mesentery or stump of the appendix. The patient, therefore, needs to remain in the hospital long enough to have the stitches removed; even this is not necessary, and many patients go out upon the street or are taken to their homes in perfect safety a day or two after the operation. The average stay of patients treated with the small incision and

the freedom of the hospital does not exceed a week, and from this practice no harm has ever resulted, but rather the greatest benefit and satisfaction.

In eholecystostomy the incision is naturally longer, because most of the patients are fat and have a thick abdominal wall. Nevertheless an inch and a half incision usually gives adequate access to the gall-bladder, and incisions of this length require no reduction for the attachment of the peritoneum to the wall of the gall-bladder. After the removal of the stones, if any, and the introduction of a drainage tube the patient is kept on his back only long enough to secure adhesions between the gall-bladder and the attached peritoneum. He is then given the liberty of the hospital. The skin incision in these cases especially when there are renal or cardiac complications, is best made by the use of Schleich's infiltration, and the operation brought to an end under gas anesthesia. The duration of both stages of this operation is rarely more than twenty minutes. The stay in the hospital depends much upon the choice of the patient. Dressings must be continued until the wound closes or until a secondary cholecystectomy is performed.

When herniotomies are undertaken before the scrotum is filled with the abdominal viscera and the abdominal wall opened proportionately, an incision two inches long is adequate for its purpose, and if the fascia is brought together with sterile, twisted silk, properly handled, and the fat covering the cord is coaptated with a few fine interrupted stitches, there is no reason for keeping the patient in bed more than a day or two, or in the hospital longer than for ideal appendicectomy. The first operations which I observed of this sort were performed by Colci in Florence in 1898. His herniotomies consumed not more than four minutes under chloroform or twenty minutes when complicated by the absence of anesthesia or by accessory operations. His patients were either preparing for military service or were operated upon to relieve them of the inconvenience of the truss. In no other operation does the short incision, the brief anesthetic, and the ambulatory treatment appeal with more force

to the patient. If the multitudes who wear trusses had not been alarmed by the anesthesia, the long stay in the hospital, and the mutilating scars which their fellow sufferers have brought back from this operation, thousands would seek surgical relief.

Suprapubic cystostomy is frequently necessary for the temporary drainage of the urinary bladder in acute obstruction from senile prostatitis. In these cases the short incision under Schleich's infiltration, and the drainage of the bladder, offers the only relief consistent with the safety of the patient. The small incision makes the closure of the bladder certain, and prevents the establishment of a permanent fistula and its added misery to the patient and the patient's family.

In removing large ovarian tumors of a cystic nature it is the part of wisdom and good sense to make as short a cut in the abdominal wall as possible. A thirty pound cystoma can be as easily removed through the tense abdominal wall an inch and a quarter long as through one five or six inches long, and the inconvenience to the patient resulting from this short incision is little more than that which follows paracentesis.

The reputation of the surgical profession is established by the self-disseminating records of operations performed under the most favorable circumstances by men of the most painstaking methods and sharpest diagnostic acumen, by men of the most farseeing and conscientious counsel, of the most direct, expeditious and accurate technique, and this reputation makes possible the compromising efforts of the precipitous, enthusiastic and bungling tyro. Nevertheless there is no element which adds to the comfort, safety and convenience of the patient which the true surgeon can afford to overlook. His own ease, convenience and comfort must not be considered. The possibility of a shorter cut, a shorter anesthesia, a shorter stay in the hospital, amply repays all the expedition, accuracy and intensity of attention which they call for. The reputation of the profession does not suffer more by the diversion of patients from the hands of the honest and skilful operators to those of the inexperienced

and unscrupulous tradesmen by the process of fee-splitting than it does by the imported disregard of the patient's right to the gentlest, the most expeditious and sympathetic treatment which will meet the scientific indications to inflict the minimum amount of traumatism and cure the patient safely, quickly and pleasantly.

Discussion.

Dr. E. Wyllys Andrews: Some years ago, when Dr. Morris published his little aphorism about "an inch and a half incision, and a week and a half in bed," I had occasion at the Michael Reese Hospital to do many interval appendectomies. I experimented in reducing the length of incision to the shortest possible limits. It was easy to remove a purely interval appendix, one in almost a normal condition, through a one-inch incision. There was commonly no difficulty attending it whatever, particularly if the patient was not very fat. The limit of this, however, was reached in my own work one day, when I took a sharp osteotomy chisel half an inch wide, punched a hole through the skin with it, and then through that without any great trouble removed the appendix. The incisions which are made so short have to be retracted so forcibly as to stretch them to double their length. One can stretch a half inch incision to an inch. Buttonholing of muscles a little wider than the skin cut you have no trouble in getting narrow retractor blades through. You can then hook up the appendix and colon easily through any hole that will admit the finger or a blunt hook. But this predisposes so decidedly to wound infection by traumatism of the muscular tissues that I came to the conclusion it was unadvisable. Of course, such an incision is self-closing. With the merest slight puckering-string stitch (subcutaneous) it is scarcely visible. Furthermore, if you want a cosmetic effect in an inch-and-a-half cut, with buried catgut stitch, if you draw the stitch tightly, it puckers and seems but one inch long. But what is the utility of all this? If it delays the operation it is worse than the long incision.

Certainly, Dr. Holmes' conclusions, as stated by him, are most true, and impressive, but to my mind they carry with them a possible element of danger, because they are so true. The thing that is true ninety-nine times and fails once in a hundred times may mean the loss of life. The abdominal surgeon who has too great a hobby for short incisions will lose a patient now and then because it is impossible for him to deal properly with the pathological conditions through such a small opening. A case will come in which there is only one safe line to pursue, and that is to make a long incision, make it at once, and get all the room and view you can. He discovers this after he has made his small opening, and if he is a man slow of thought and refuses to change his plan, disaster awaits him. How much then will

it be safe to emphasize this in teaching surgery? Probably a middle ground is safest here as in most matters.

To me the argument that such points are popular and will attract patients is *ad captandum* and of no value. I have had enough work to keep my mind clear and balanced without mixing it up with such matters.

Dr. Albert Goldspohn: I will admit that the things Dr. Holmes has stated can be done through and inch and a quarter incision if the case is exceptionally favorable, but if we have to deal with a larger number of cases, I do not admit that we can operate on the average case through such a small incision and do the best surgery. In this day, when we understand the principles of making a wound in the abdominal wall, and the correct principles of closing it so well, and have so much assurance that we do not get a hernia, I think it is going beyond reason to attempt to do good work through such a short limited incision. Even the interval appendix frequently lies retroceally, or it dips down into the pelvis, and the cecum will not accommodate us and bob up, so that the appendix can be removed through a very small incision, and it will be necessary for Mohammed to meet the mountain.

In regard to large ovarian cysts, it is true I have removed large ovarian cysts through as small an opening as is available, either anterior or posterior, if the case is a fortunate or favorable one, but these large cysts are seldom unaccompanied by adhesions. We can tap the cyst and draw it out through a small opening; it does not make much difference how large the cyst is, but these are the exceptionally favorable cases, and what is true of them is not true of the average.

In regard to the early getting up of patients, I think Dr. Holmes' teaching is again unwisely extreme. These patients do not suffer from lying in bed a week or two, and they do it willingly. It is not on account of the little danger of the incision in the abdominal wall that they need to stay in bed either. They can get up earlier so far as the abdominal incision is concerned. But to give longer and better rest for recuperation to the internal organs that were the real seat and subjects of the operation, I think it is very much to their interest to remain in the recumbent posture longer in preference to getting up so early, thus giving the internal parts and organs the rest that they need in order to attain the best results. The incision is a secondary matter.

Dr. Holmes (closing the discussion): I am very much pleased with the frank way in which my paper has been discussed. I hope, however, that the gentlemen will notice in the first sentence of my paper I spoke for an incision which was large enough to perform the necessary operation. It should be as small as possible, according to my notion. I am positively opposed to that form of surgery which opens the abdomen in such a way as to bring the viscera

out and treat them as a harness-maker does his harness. I think such is the tendency which has been imported into this country, and is encouraged in various clinics greatly to the discredit of our profession. It makes surgical procedures unpopular; influences patients to withhold themselves from surgical operations which ought to be undertaken early. With a short incision, a limited amount of manipulation is necessary to bring about a curative result. It is a fact that any man who has a fad and wishes to treat his cases by a certain particular method is prone to run into dangers and difficulties, and this happens especially when he has a distinguished visitor. I have no fad in regard to a small incision yet I hold that the incision should be as small as possible. I am always ready when occasion requires to make it as long as anybody else can in an abdominal wall.

Anyone who knows anything about my manner of operating, knows that I follow out what I believe to be the most scientific indications. I have no statistics to bring before you to show that everything can be done by this particular method, but I do insist that every operation should be done for the benefit of the patient, not for the benefit of any statistics, not for the benefit of any particular plan or line of work which a man may have laid out in the contemplation of a paper. The patient is the only person to be considered in a surgical operation. The surgeon should modify his procedure to meet the exigencies of the case. If the patient has a suppurating gall-bladder as big as one's head, and a heart which seems to preclude the use of the most trifling anesthesia, I believe it is the duty of the surgeon to operate, by a method adapted to the case.

Do not let anybody assume that I am presenting to the Society any particular fad, either a fad with regard to the length of the incision or a fad in regard to letting the patient out of bed soon after operation. I do not see any reason why these patients should not get up as soon after operation as possible. I have had quite a number of patients who have been willing to undergo operations because they would not be confined to bed three or four weeks in a hospital after I had operated on them. These patients would have refused operation if they had thought they had to be ten days in bed and three weeks in a hospital. I believe that the erect posture is an advantage in almost every surgical operation that we do, even in large operations, as, for instance, the removal of the carcinomatous breast, it is a great advantage to have the patient sit up. In all forms of laparotomies with a small incision and no infection is left in the abdominal cavity, the erect posture is desirable. There are many instances where a long stay in bed is more fatal to the patient than the operation itself. I speak for making as little surgical insult as possible, and make it so that it conforms as nearly as possible to that sort of procedure which we as physicians would be willing to have undertaken upon ourselves if it were required.

THE DUTY OF THE MEDICAL PROFESSION IN RELATION TO CRIMINAL ABORTION.

Symposium presented to the Chicago Medical Society
November 23, 1904.

BY C. S. BACON, M. D., CHICAGO.

Those who have given any attention to the subject know that criminal abortion is a serious danger to society and one very hard to combat or control. It is probable that from 20 to 25% of all pregnancies terminate in abortion and at least $\frac{1}{2}$ of these abortions are induced. There are probably 6,000 to 10,000 abortions induced in Chicago every year. It is probable that a large majority of these operations are made on married women. What proportion of this nefarious business is done by midwives and what by physicians is difficult to say. How much sickness and death results from infection following this practice is also not definitely known. Every physician is however aware that criminal abortion is one of the most important causes of gynecological disease and not an unimportant factor in the mortality of women of childbearing age.

To obtain data on this subject and eventually exercise some influence in the control of this crime some months ago I proposed to the Council of our Society to create a committee to investigate the subject. This committee, consisting of Drs. Rudolph W. Holmes, Chas. B. Reed and myself, has looked up the law on the subject of abortion in Illinois and gathered the decisions which have been rendered in this state. It has also looked into the subject of advertising in the papers and looked up the records of the Coroners office for the last 20 years. Through the Bulletin of the Society it has called the attention of the members to the subject and to the purposes of the committee. It has been repeatedly stated that no crusade was contemplated but rather a plan of education which it is hoped will lead to the exercise by the Society of a persistent and continuous repressive influence that will give material assistance in restraining the evil and in putting some check to the debauchment of the minds of the profession and of the commun-

ity. It has now seemed desirable to call attention to the objects of the committee in a more public way and we have arranged with the cooperation of the President and Secretary of the Society the symposium which we present to you tonight.

We conceive it to be a principle well established and agreed to that the medical profession should interest itself in all matters that affect the health and welfare of the community. In accordance with this principle it is its duty to take even the initiative in combatting conditions that tend to the injury of the race while it is certainly obligated to give its best cooperation and support to all measures and laws already inaugurated and in force that apply to the correction of such evils.

The fulfillment of this obligation in any special case and particularly in regard to the special instance of criminal abortion implies obtaining, 1st. A collection of data on the subject, an acquaintance with the facts in the case; 2d. Clear ideas of the nature of the evil and the reasons for its repression; 3d. Knowledge of the measures or laws already inaugurated to correct the evil; 4th. Knowledge of the methods of executing the laws, the procedure of the various courts, the rules of evidence and finally, 5th. Acting in accordance with our knowledge in assisting in every possible way in remedying the evil. This course implies a study of the factors chiefly responsible for spreading the evil and of all the conditions that affect the measures designed to restrain it. It also includes a consideration of the relation of criminal to therapeutic abortion embracing a careful study of the legitimate limitations of the former.

It will not be possible tonight to go into the history of this practice which has no doubt existed from the earliest times nor to say more about its prevalence. The conditions that lead to the practice both among the married and the unmarried are too well known to require comment. It will be desirable however to spend a moment in a consideration of the nature of the practice and the reasons for its repression. The very im-

portant moral and religious aspect of the question will be presented by our reverend guest but I may be allowed to discuss the subject more from the medical and social sides and in so doing I shall avail myself in the main of the divisions made by Prof. Lewin in his exhaustive monograph. From this point of view we may indicate the reasons for the repression of the practice under four heads. 1st. It is the greatest possible injury to a human being, namely the embryo or fetus which is destroyed. It is a fundamental principle that no one has a right to take a human life except in self defense. The law which reflects the moral ideas and convictions of the community now recognizes no other exception to this principle in civilized states, in case the human being has been expelled from the world. It does not admit the right of anyone, physician or other to take the life of even a hopelessly insane or diseased person even on his own request. It recognizes no such right pertaining to the father in reference to his child, a right that was formerly admitted in old Roman and Patriarchal laws. We think the reasons for this principle are obvious. The right to life is the most fundamental right of an individual and he should not be deprived of it no matter whether he be diseased, unconscious, worthless or for any reason whatever unless the State represented by its judicial officers decides that he has forfeited his life by his crimes and rendered its extinction necessary for the welfare of the State. Now we hold it to be an unimpeachable statement that the child is a human being while still unborn just as much as it is after its expulsion from the uterus. No one doubts that the fetus is a living being, dependent it is true on the mother for its nourishment and protection from injury and cold. After birth however it needs the breast and the care of the mother for a long period. The fact that the fetus is an intrauterine parasite does not prove that it is a part of the mother any more than that the intrainestinal parasitic existence of a tape worm proves that the worm is not an independent existence. The fact that the fetus lacks some of the functions that belong to the adult individual,

for example the respiratory, does not disprove its independence or its human nature. The infant also lacks some of the adult functions for example the reproductive. The self consciousness of the fetus is only in abeyance because not aroused. The fetus then is a separate being and not a part of the mother, not a *pars viscerum* like the ovary or appendix which she can do with as she pleases.

And this human being is just as much an independent being at the beginning of its intrauterine life as after it has reached a condition of extrauterine viability. The attempt formerly made to distinguish between a fetus *animatus* and *inanimatus*, to determine when life or soul entered the body has of course been abandoned by biologists although the statutes of certain states still retain a reminder of the old discussions. The time of awakening which means when the first fetal movements are felt by the mother varies in different women depending upon the varying sensitiveness of mothers, but is placed generally between the 18th and 22d weeks of pregnancy. Recently a careful observer has heard the fetal heart beat at the 13th week and thus demonstrated life 5 to 10 weeks before it was held by many laws a crime to destroy the embryo. What has been said concerning the animate or inanimate fetus applies also to the attempt to distinguish between a fetus *formatus* and *informatus*. We can draw no line in the life history of a human being, from its beginning to its death when it has not the fundamental right to existence and the help of its fellows in this right.

This statement does not mean that all lives are of equal value. We must recognize a great difference in worth to the world between a general and a private soldier, between a Darwin and an imbecile, between a young mother and a decrepit, dying old man or a helpless babe. This difference in the value of lives may influence our conduct when we must choose to save one or the other. This is the reason that we think justifies us in destroying the child to save the mother if we feel certain we can save only one. It must be insisted however that the

responsibility of deciding between the value of the two lives is not to be lightly assumed.

This reason for objecting to the practice of abortion because it is a wrong to the human being destroyed applies to the mother as well as to a third person. Because she is partly responsible for its creation gives her no more right to destroy the fetus than it would to destroy the babe after birth.

2d. It is an injury to the mother. It is an unjustifiable risk to her life and health. It might be held with some show of reason that the mother has a right to assume this risk if she fully understands its extent. The law however does not recognize that this assumption of the risk by the mother absolves a third person who undertakes the act and universally decrees punishment for manslaughter when it results in the death of the woman. All will admit the justice of the provision which fixes a greater punishment where abortion is performed without or against the will of the mother.

3d. It is an injury to the relatives of the unborn child and of the mother. In many cases the loss of the child may not seem an injury to the parents and family as when they are poor and the addition of another mouth to feed might increase the struggle of the bread-winner and diminish the ration of the other members of the family. We are not however able to judge in this complicated life of ours the bearing of another factor on the destinies of an individual or family and it is well possible that the factor put out of existence might have been potent for good. Under any condition an injury to the mother will be a great injury to her family.

4th. It is an injury to the State. The sickness or disease of the mother resulting from the practice is certainly of grave concern for all must recognize the mother as one of the most valuable members of society. The loss of children destroyed in utero, the low birth rate so far as due to this cause is admittedly a fact of great importance which perhaps needs no further comment.

These reasons for opposing the induction of abortion and for treating it as a crime, have not been acknowledged at all times and

in all places and indeed they are not now generally accepted in all their bearings. The law which reflects the conscience of a community has frequently ignored the practice altogether and in many instances it has simply considered the matter when the mother's life was endangered. Time does not permit me to give even the briefest history of the laws that have been in operation in different countries. For our practical purposes it is only necessary to know the law of our own state. This will be discussed by the attorney of the Medico-Legal Committee of our Society and I will here only call attention briefly to its essential features.

Our legislature has attempted the repression of the practice and has passed laws to this end. These statutes have then replaced the common law decisions which would otherwise have prevailed. According to the common law the fetus was not considered a being until after quickening and therefore it was no crime to destroy it. After quickening its destruction either by the mother or by a third party was a misdemeanor not a crime punishable by imprisonment. According to our Illinois statutes there is no distinction between an animate and an inanimate fetus and feticide or abortion is not murder but a high misdemeanor punishable by imprisonment from one to ten years. A third party is punishable for feticide whether the mother gives her consent or not. An unsuccessful attempt to commit abortion is punished the same as one that is successful. The intent is the essence of the crime and so the efficiency of the means employed is not considered. The crime is the same whether the fetus be alive or not. The provisions concerning the keeping, giving and advertising of abortifacients will be given by Dr. Holmes. The death of the mother resulting from the act is punishable as murder.

Before the prosecution of anyone suspected or accused of the crime it is necessary that he or she be indicted by the Grand Jury. The accusation may be made by anyone acquainted with the facts. The accusation must be supported by evidence sufficient to justify the States Attorney in bringing the matter before the jury or the case may be

brought before the jury by means of a justice warrant. If the mother has lost her life as the result of the attempted abortion the indictment will be murder and not induction of abortion and the evidence will come naturally first from the Coroner and will be presented through him to the Grand Jury.

Notwithstanding the prevalence of the crime there are few accusations or indictments for inducing abortion unless the death of the mother results when of course the indictment is for murder. In the few cases of indictment for producing abortion the action was brought because of the serious injury to the mother. Ordinarily it is very difficult to get satisfactory evidence against a professional abortionist. The relatives or others interested in the case are generally very anxious to prevent any publicity for obvious reasons and even in case of the death of the mother it is frequently impossible to get any member of the family to take action in the matter. Outside parties cannot be expected to interest themselves with such matters which can concern them only in a very indirect way and which would bring them only great annoyance and perhaps place them in a very embarrassing position. This difficulty of securing evidence and initiating an accusation is the reason why the abortion law is so much of a dead letter. It may be admitted at once that it will always remain a dead letter so far as the crime can be committed without injuring the health or life of the mother. The law is necessary however for use when the mother is injured by attempted abortion and for the restraining effect it may have.

It is supposed by many that the State Board of Health or the local department of health has a duty of instigating prosecution of offenders against the laws on abortion. This is a mistake. The State Board has no other power or duty than to withdraw the license to practice from any physician or midwife who has been convicted of the crime. The local board has not any duty in the matter so far as I can learn.

It seems then that professional and other abortionists may continue their nefarious business fearlessly as much as they please

unless they jeopardize the health of the mother seriously when there is some little danger they may be found out and punished. Here the conscientious, fearless and public spirited physician may have a chance to play a part. In connection with his duty to his patient comes his duty as a citizen to see that the laws are obeyed. But with this duty there is also a great responsibility. Shall he betray his patient? Of course not. But should he not exercise his influence on the side of the law and try to persuade his injured patient and her relatives and family or in case of her death her surviving relatives to prosecute the venal offender who has done so much harm? I believe that most members of this Society will agree that in many cases such an influence ought to be exercised. It is a part of the duty of your committee to stimulate to a consideration of this obligation.

We deem it the duty of every physician to report all cases of death due to abortion to the Coroner and assist in the prosecution. This is the plain law—All deaths due to "violence, casualty or undue means" shall be reported to the Coroner. The law also provides, as already stated that if the death of the mother results from the attempts to produce abortion the crime is murder. A physician is therefore under just the same obligation to report these cases to the Coroner as he is to report any other murder. Why, then, is the death certificate generally made out in such a way that the case is not referred to the Coroner? No doubt because of the many disagreeable annoyances that are involved in an honest report. First, there is the loss of time resulting from attendance at the Coroner's and the Grand Jury and finally at the trial. Then the attacks to be expected from the defendant's attorney are not pleasant to one who has little or no experience in court. Thirdly, the enmity of the friends of the accused midwife or physician is a factor that will cause many to hesitate to do anything that promises no return except loss of time and money, and worry and annoyance. Finally the importunities of the relatives of the deceased, who object to the Coroner's inquest on account of the injury to

their own feelings and the good name of the dead, make a strong appeal to the sympathies of the physician. Only a clear conception of the enormity of the crime and the duty that one owes to the community to prevent a like desolation of other homes can counteract these deterring elements and keep one true to himself.

For the successful handling of the evidence in any case in which a physician may become involved it is necessary that he knows not only the laws on the subject but also some of the rules of procedure of the courts and we deem it very desirable to call attention to two points in this connection. The first is the subject of privileged communications. This will be discussed exhaustively by Dr. Moyer. I will only remind you that we have no privileged communication in this state. A physician is obliged to answer any question in a court of law. Professional secrecy is not only not required but also not allowed. You are therefore obliged to reveal, for the ends of justice, all the facts that may have come into your possession.

The other very important point in regard to evidence in fatal cases is the value of dying declarations. It is a general rule governing the admission of evidence that hearsay evidence is incompetent. The most notable exception to this rule is that which admits of a dying declaration or one that is made by a person who has given up hope of recovery. The law holds that the solemn circumstances connected with such a statement gives it all the binding effect of an oath. In abortion cases it is of peculiar importance and often absolutely necessary to convict. Its nature should therefore be studied with great care.

Dying declarations are admissible only in cases of homicide and for this reason it has been contended that they should not be admitted in these cases because the crime is not the killing of the patient but the procuring of the abortion and that the incidental death of the patient does not change the nature of the prosecution. In Illinois however the statute especially states that when the death of the mother results the crime is murder and it follows of course that dying

declarations are admissible. It is essential however that in order to be admissible, first, it shall be made when the patient has abandoned all hope, second, it shall be voluntary not suggested and third, to be of much value it shall name a definite person as the producer of the act which caused her sickness. Such a declaration should be carefully noted and remembered with all of the circumstances surrounding the making of the declaration. The responsibility of the physician, nurse or other person to whom is communicated such a statement is great for it may be the chief factor in the conviction of the criminal.

Several other points concerning evidence are of great value but I have not the time to discuss them further and deem it better to illustrate some things that have been said as well as certain points not specifically mentioned by the report of a case:

It is a case of successful prosecution for manslaughter of a mid-wife who caused the death from septic peritonitis of a patient upon whom she performed a criminal abortion.

The patient was a married woman 27 years old who had had two normal confinements, the last of which I attended in Jan. '03. I last saw her in April '03 when I found she had completed the puerperium satisfactorily. From the testimony given in court by her husband and others it seems that she had missed one or two menstrual periods and had some nausea and vomiting for 3 or 4 weeks in Feb. '04. Thinking she was pregnant she obtained the care of a mid-wife, Mrs. Jahnke, whom she then consulted and with whom she made an appointment. On Monday, Feb. 29th Mrs. Jahnke came to the patient's apartments in the hotel where she was staying and there met the patient's husband. The husband had previously discussed with his wife the subject of an operation and had disapproved of it. He now asked the mid-wife what she was going to do. The mid-wife responded that "it is only a very slight operation, a prick of a pin and there is no danger at all." Upon this answer which was repeated by his wife

the husband left for his office. It appears that the woman suffered much during the day, had considerable hemorrhage and in the night she called the mid-wife again. The next morning the husband opened the door of his wife's room and found her lying across the bed the body and lower extremities exposed and the mid-wife kneeling before her between her knees with some kind of an instrument in her hand. This instrument she waved at him and told him to go out. During the following night Dr. McMichaels was called in about 2 A. M., March 2d and found the woman with a rapid pulse, high fever, distended and tender abdomen. As the patient told him that she had had an abortion performed he diagnosed a septic peritonitis, gave her morphia hypodermically and advised her to send for me. He was called again about 9 A. M. in the morning and found her condition the same. I saw the patient between 12 and 1 P. M. of the same day, Wednesday, March 2d and found the same condition as that described by Dr. McMichaels the night before. The patient said to me "Doctor I am going to die" and then went on to say that she had had an abortion produced by a mid-wife, Mrs. Jahnke who lived over near Lincoln Ave. I had her sent to the German hospital where at 5 P. M. of the same day she was etherized and curretted. I found the uterus in position but enlarged and flabby and the cervix somewhat dilated so that the end of the finger could be carried into the uterine cavity. Finding loosened tissue I curretted away a considerable amount and washed out the uterus with sterile salt solution. Later she ran a rapid course of septicaemia and peritonitis and died Sunday, March 6th. During her stay in the hospital she spoke frequently to her nurse and myself of the operation that had been done by the mid-wife and all the time realized that she would not recover. An autopsy made by Dr. Lewke the coroner's physician, showed the usual findings of a peritonitis and some remnants of decidua in the uterus. The autopsy was not made until after the injection of an embalming fluid by an undertaker.

Upon the statement of these points to the

coroner's jury the mid-wife was held to the grand jury and by them indicted. She was tried in Judge Clifford's court, May 23d to 26th. The prosecution was conducted by Assistant States Attorney Dobyms. She was defended by Mr. Platke who called to his assistance Drs. Krost, Leaming and Weil.

The defendant claimed that she was called by the patient to treat her for womb trouble, that she found a tipping of the womb for which she inserted a cotton tampon and that three days later she found a slight show which she considered a menstrual discharge. On Monday night, Feb. 29th she was called to the patient and found her flowing some with the mouth of the womb opened the size of a leadpencil. The next morning she examined the patient with a speculum and found the womb open about the size of a lead pencil and a blackened ring around the mouth of the womb. She denied having put anything into the womb and said that the patient told her that she had herself the day before, Monday, inserted a leadpencil into the womb.

The points that the medical defense sought to establish were that it was impossible to make a positive diagnosis of pregnancy at the 6th to 10th weeks, that, as no microscopic examination of tissue scraped from the uterus was made, it might have been tissue from a hypertrophic endometritis and that after a proper uterine curettement no decidua would have been left in the uterus to be found at the autopsy.

In answer to these objections I held that the combination of the symptoms and findings left no room for doubt of the existence of the pregnancy. Even by macroscopic examination decidua could be distinguished from the scrapings of a hypertrophic endometritis or of exudative endometritis. It was as a rule thicker and was more warty and sieve like on the uterine surface and smoother on the inner surface. Moreover the uterine cavity was larger in a case of pregnancy than in endometritis. These findings with the symptoms and history left no room to doubt the condition.

The examinations of Prof. Werth were quoted to show that all the tissue could not

be removed by a currettement and that some pieces might very probably be found in the post mortem.

The attorney for the defense tried to prove the good reputation of the defendant and thus opened the way for the prosecution on rebuttal to prove by a much stronger evidence of a well known physician who lived in the neighborhood of the mid-wife that her reputation was not good.

The foolish story of the mid-wife concerning the finding of a black ring around the mouth of the cervical canal which she assumed was made by a leadpencil which the patient may have introduced 15 to 20 hours previously no doubt injured her own case.

But the most important link in the chain of evidence was the ante-mortem statement. The introduction of this was strongly contested by the defense. The patient's first statement was made to me Wednesday, on my first visit four days before her death. Although her statement was unequivocal "Doctor I am going to die" it was questioned whether she could then have given up all hope and was in such imminent fear of death as to give to her statement all the binding force of an oath. In subsequent statements to me and to the nurses it was not certain that she mentioned the name of the mid-wife. These statements made to the nurses were made under such conditions as left no doubt as to their admissibility and in them she threw the blame on the mid-wife who had assured her that there was no danger in the operation but she did not name the mid-wife. It was my best recollection that on one occasion in the hospital while speaking about the abortion she mentioned a second time the mid-wife's name. This was the statement finally admitted by the court.

For me this case contains two great lessons. First one should always strive to get an unimpeachable ante-mortem statement. Second. There must be unimpeachable evidence of the existence of pregnancy which would better always embrace a microscopic examination.

In our consideration of some of the duties of the medical profession in relation to the crime of abortion we have insisted upon the

importance of learning the facts concerning the prevalence the causes and nature of the crime and the laws and rules of evidence that apply to these cases. The physician should also use his influence first, to prevent the commission of the crime and second, to bring to justice the offenders. In cases of death consequent to abortion, that is, in cases of murder he should report the case to the coroner and assist in the prosecution. The profession should help in executing the laws concerning criminal advertising. If all this could be done we could hope for a considerable diminution in the practice especially in the case of married women. The problem of the unmarried is more difficult to handle and for this side of the case, I will, in closing state the conclusions of Prof. Lewin with which I heartily agree namely that the only means that we can regard as efficient is the erection of a sufficient number of obstetrical asylums in which the unmarried can be protected in their anonymity, well cared for and through which the children can be assured a proper existence.

THE MORAL AND RELIGIOUS OBJECTIONS TO INDUCING ABORTION.

BY REV. PETER J. O'CALLAGHAN,
ORDER OF PAULISTS.

Like divorce, abortion has been a revival by Anglo-Saxon civilization of an ancient pagan practice. The honor of such a revival is a doubtful one, and the realization of its significance will humble us greatly when we as a people awaken to the consciousness of our shame. The fact that the custom has spread quickly during the past century to France and then to Germany and America is no proof of the wisdom of its revivers. It was one of the triumphs of the ancient Church to have practically eradicated the crime of abortion. That ancient Church stands today where she stood a thousand years ago. She declares that no man has the right to destroy by any direct act the life of an innocent human being. In the face of a sentiment which has persuaded a large sec-

tion of the medical profession that direct abortion is sometimes not only justifiable, but even commendable, that Church has unflinchingly declared that the direct taking of an innocent human life is always murder, no matter what be the stage of its existence.

DECISIONS OF AUTHORITY.

In 1884 her authoritative teaching body was asked whether it was safe to teach in Catholic schools that the operation of craniotomy is sometimes justifiable. The answer was that it was not safe so to teach. In 1889 that same body was asked if any operation at all looking to the direct killing of the child *in utero* was justifiable. The question was also answered in the negative. Again, it was asked if this should be done when absolutely necessary to save the mother, and in 1895 this question was answered in the negative. Again, the formal question was asked, if in extra-uterine conception any operation be justifiable which meant the death of the child. This question was answered in the negative. The Church, therefore, has constantly said that no one has a right on any occasion to procure directly by any act of his the death of any human being. It maintains the right of the unborn child to live just as much as the right of the mother to live. If one or the other must die, or both die, and if both die without act of ours, responsibility is not ours. Such is the position of the Catholic Church.

Although these are not dogmatic definitions of Catholic doctrine, they are the authoritative decisions of the Catholic Church on the question of abortion. The reason for the uncompromising position of the Church in this matter is clearly to be found in the decalogue, "Thou shalt not kill." The Church has always feared to make what she considers the word of God say less than it says, or more than it says. The position of the Church cannot be appreciated by any who regard the ten commandments merely as a Mosaic code of moral laws, or as an embodiment of Jewish experiences in ethical culture. To the Church the ten commandments are a revelation of the essential and profoundly vital conditions of moral health.

She regards as superficial the advantages that expediency may suggest in the breaking of the law. She is as inexorable as the Divine law itself, which she interprets. Here comes the dividing line between the Church and empiricism. Only the experience of the race can demonstrate the wisdom of either the one or the other. Those who raise the question will never read its answer. The centuries alone can give that answer, and the Church alone has the experience of the centuries that are past, and she alone as an organic entity will gather in the data of the coming centuries.

Dr. Osler, in his lecture on "Science and Immortality," delivered at Harvard, and now published, insinuates that religion is governed largely by emotionalism, while science rises gradually above all save the demands of calm reason. His lecture is replete with evidence of the injustice of the first assertion and the falsity of the second. The attitude of a large portion of medical science on the question of abortion illustrates what a dominating influence emotionalism has upon men who reverence reason very often more than religion. The attitude of the Church on the question bespeaks no emotionalism in those to whom religion is the very breath of their nostrils. Dr. Osler, speaking with something of that calm reason that should belong to science, as it does without doubt to all religion that is mostly of the name, refers beautifully to the perpetuation of all life in its thin fringe upon the coral reefs of past generations. He says, "The morphological continuity of the germ plasma is one of the fairy tales of science." Through all the havoc that death seems to spread and through every cataclysm that has seemed to mean extinction, the germs of life have been perpetuated and perfected; that morphological continuity is of infinitely more importance than the saving of any individual or any multitude of individuals. In the perpetuation of the human race, there are considerations of infinitely greater import than the life or happiness of the individual. There are moral principles without which there will be no life safe, and no happiness that is lasting. It is only one of many paradoxes that

human life is safest when its worth is not exaggerated. Those who value it most in the individual may be the first to stain their hands with human blood, and assume unto themselves that dominion over life which belongs to the Creator alone, and which cannot be seized with safety to the race by any man or body of men. If the taking of human life is a crime only because men have found that Society is impossible without the severest punishment of murder, then may the question be raised. How far is it necessary to respect life of the individual? If it is only expediency which sets down the taking of human life as a great crime, then the shifting demands of expediency must be hearkened to. If the demands of expediency are cogent in determining the right to cut off human life in any stage of its existence, then we have not morality, but only an emotional empiricism. Whether the Kantian maxim that a moral law must be capable of universal application be a true definition of the essential quality of all moral law or not, it is certainly a good test of the morality of any principle of conduct. Principles of conduct cannot be arbitrarily confined to particular cases. If it is right to take human life to save a mother's life, it is right to take a human life to save a mother's honor. If it is right to destroy the unborn child in order to avoid the suffering that shame brings, it is right to destroy a child whose birth would mean for others the sufferings of poverty. If there is such a thing as therapeutic abortion that is commendable, there is no such thing as a criminal abortion that is reprehensible. Legislators may determine that some conditions justify abortion, while other conditions do not, but their judgment will not control the consciences any more than their present laws inconvenience the most of those that are now guilty of what is called criminal abortion.

— THERAPEUTIC AND CRIMINAL ABORTION.

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BY CHARLES B. REED, M. D.

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The conditions which safeguard human life and enhance its sanctity are the result of

a gradually developing civilization and have passed through many stages from the custom of exposing unwelcome, delicate or female infants to the inclemency of the weather on a bleak mountain side to a state which provides incubators for the immature or improperly nourished child.

In the course of this development more and more attention has been devoted to the unborn babe and its existence and its rights have attained a definite position in legal and moral law.

In consequence any attempt to destroy those rights must be founded upon a basis of fact wherein the motive cannot be impeached. Is there an unimpeachable motive? Father O'Callahan, representing religion and the Catholic church, says there is not. I rejoice that science and humanity positively declares that there is. In the advance of moral feeling the opinion has developed that in certain cases where the lives of both mother and child are imperiled and one could be saved, the child should be sacrificed, since the value of the mother to the state is far greater than that of the unborn babe. Hence where certain diseases or complications appear in or exist during the course of gestation and threaten the integrity of the case, a broad human sentiment now permits, nay even demands the destruction of the foetus.

When this situation eventuates before the viability of the child it is recognized as a prophylactic or therapeutic abortion and becomes a justifiable measure in the presence of such conditions as hyperemesis gravidarum and eclampsia which do not yield to treatment.

In certain cases of beginning and advanced pulmonary tuberculosis, cardiac disease, insanity, severe nephritis or serious and irreducible uterine displacements with dense adhesions the operation is justly performed.

In cases of absolutely contracted pelvis where the patient refuses the Caesarean operation abortion is sometimes desirable although the relative dangers of the two operations do not greatly differ in skillful hands.

Therapeutic abortion is most satisfactorily compared to the practice of Caesarean section "in agony" and in this operation there is

no conflict strange to say between the church and state.

The same question may also arise where the genital canal becomes impassable through the presence of benign or malignant tumors or cicatrices of the uterus or vagina when laparotomy is inadvisable or refused.

The results of therapeutic abortion when executed in a careful scientific way are generally good and the indications for its performance are found of course both in and out of marriage.

Abortion in all its phases is necessarily more common in the married state and it has been said that almost half of all child-bearing women have an abortion before the 35th year.

It is also true that the medical man is most frequently approached by married women who desire the removal of the socially inconvenient egg. For this situation there is of course no excuse.

When the product of conception is deliberately destroyed for social reasons only and without physical justification, in a woman married or single, it constitutes a criminal abortion before human and moral law.

It is ignorantly maintained by many that the dislodgement of the egg before quickening is in no sense reprehensible because it is thought that the egg is not alive.

This is a distinction of degree only and a species of special pleading, for the fertilized egg contains all the hopes and possibilities of a mature foetus and while quickening usually occurs at the 16th week, the foetus is practically fully formed at an earlier period.

If a woman hesitates to destroy her offspring after quickening why should she not hesitate before that event. Does the simple fact that she feels the foetal movements make the enormity of her offense any greater.

In what particular week can it be said that the operation is not proscribed.

In so far as the act affects the tissues of the hostess, in many cases it would be better to wait the termination of gestation and then strangle the new born child for the result to the child is the same in both cases while the physical penalty to the mother is greatly

diminished. This is a relapse to barbarism to be sure but much safer for the mother who is ready to squarely face the facts.

If it is a fact and I believe it is, that the maternal affection is based in a large degree on the dependence and helplessness of her child, then the earlier months of pregnancy should present the greatest opportunity for the development of this feeling in protecting the growing egg.

It is a melancholy truth that some mothers exhibit no affection for the child until some weeks after birth and in these cases there might be little hesitancy in destroying the socially inconvenient conception at any stage of its growth unless restrained by moral or humane instincts.

The four parties who have a direct interest in the unborn babe are the woman the medical profession, the populace as represented by the father and his associates and the state.

The normal attitude of the enlightened professional man is hostile to abortions.

This state of mind is possibly due not so particularly on moral and legal grounds although these should have much weight as to an unfortunate familiarity with the serious physical consequences of such efforts.

It is well attested that nearly all of the desperate and fatal complications found in these cases, occur in criminal abortions.

The deaths from such attempts are frequent and embrace a large range of causative conditions, among which as most important might be mentioned, perforation, peritonitis, septicaemia, pyaemia, tetanus, endometritis, endosalpingitis, air embolism, abscesses pneumothorax, thrombophlebitis, phlegmasia alba dolens, etc.

In France where foeticide has seriously affected the increase of the population, it is estimated by Tardieu that the maternal deaths from induced abortions reach 50% while Maygrier and Jardieu even exceed this figure and give 60% and 65% respectively.

In the presence of such statistics and with his own experience before him the medical man may well shrink back.

In this connection the attitude of the laity is not entirely above reproach.

There is a general subconscious feeling

that the practice of abortion is bad, that only depraved and desperate characters engage therein but when an instance arises in an unmarried daughter, the layman rushes to his family doctor with the story of his distress and prospective humiliation.

In a moment of weakness, financial considerations or the tears of the woman prevail and the physician consents.

The result possibly is bad, even fatal and the friends of the victim unite in damning and in legally destroying the physician. Why? Because he tried to help them? No, but because he failed to cover it up. If he is detected in such a misadventure, Heaven help him. Charity remains at home while the populace invokes the aid of the law to make an example of him—an example that will prevent such bungling in future.

The responsibility is solely his and where he succeeds the knowledge is condoned but where he fails—let him face by preference the ravenous lion that goes forth seeking whom he may devour. The legal restrictions are relatively recent in origin but none the less drastic.

It is not the murder of a living child which constitutes the offense, but the destruction of gestation by wicked and unnatural means. The moment the womb is instinct with embryo life, gestation has begun, the crime may be perpetrated.

The liability of the mother in the eyes of the law is the same as that of a third person and in many states the intent is made equally culpable with the act.

In this state the *attempt* is punishable by imprisonment in the penitentiary from one to ten years and if the death of the mother results therefrom it constitutes *murder*.

But the law unsupported by popular sentiment has proved ineffective and in many cases no attempt even is made to secure its enforcement, and the abortionist rests in security.

The sympathetic American people swing easily into hysterical extremes as shown by the adoption of various forms of imperfect legislation. The American man, layman or professional will determine a case

while at lunch along lines of abstract reasoning but he becomes woefully weak in its execution. Stringent regulations are enacted which are soon neglected and the opinion develops that such regulations are better broken than kept.

It devolves then upon the physician to keep the light before the public mind not only in general but in particular instances.

To this action should be added an effort to relieve the unfortunate woman of a portion of the social oppression and ostracism which follows her act. This I believe is the greatest influence in driving a woman to destroy her offspring.

A recent personal experience has shown that a woman who is brave enough to face this problem and go to term has innumerable and almost impossible difficulties to surmount.

The artificial conditions which drive unmarried girls to abortion should be everywhere strenuously opposed and even illegitimate motherhood might soon become a bearable penance.

The woman who in conscious knowledge of the obstacles before her, calmly faces the world with her illegitimate child is a heroine for her path throughout is beset by daily perils and pitfalls that demand all the resourcefulness of her intellect and courage. The difference between the unmarried man and the unmarried girl is most marked.

The man is promptly condoned by both sexes, probably in the belief that he is hopelessly and unalterably polygamous both by instinct and by practice.

But why is not an equal consideration given to the unmarried girl. Why must she alone face the scorn and jeers of her unttempted sisters and the contempt of their unattacked virtue.

The milk of human kindness sours in the breasts of her former friends who either pass her by with averted head and lifted skirt or turn like wild beasts to rend the unfortunate one who has broken what should be sacred ranks and openly injured their market.

Anyone who has met this problem will appreciate the difficulties in its solution. If

poor she has no respectable place in this great city where she can await in seerey and comfort the day of her confinement and after this time burdened with her child and deserted by her own sex she seeks employment in vain. No wonder in an agony of shame and humiliation she seeks relief at any cost to herself and others.

The cold blooded salmon after leaving the icy waters of the natal river, roam aimlessly and endlessly through the wide waste of ocean until in the spring of the fourth year, driven by an unconscious but all compelling instinct countless millions collect from every highway of the sea at the mouth of the ancestral stream.

Stemming the swift current and leaping the falls, preyed upon by man, beast and fowl wounded by fin of neighbor and by sharp rocks, emaciated by starvation, struggling and fighting but consecrated to the purpose of fulfilling a destiny, they force their way to the spawning beds where many die of exhaustion after the completion of their supreme life work. This instinct progressively increases in power as evolution advances from the lowest to the highest vertebra.

In the development of the vast scheme of creation it is not surprising that the one great dominant chord of humanity is the sexual instinct.

Openly or disguised it controls the main-spring of human endeavor, it drives some to the convent and some to the gallows but unceasingly it drives with relentless energy toward the preservation of the race at the expense of the individual and the woman is the most frequent sacrifice in the maintenance of our racial immortality.

On her head fall legal, moral and physical penalties that should be more evenly distributed.

Let the legal and moral enactments be what they will a broad humanity demands the protection of the mother and her illegitimate unborn babe.

Let us establish and maintain maternities. Let us found and support homes and places of refuge for the woman awaiting confinement. Give us justice and charity for the unfortunate girl who with unreasoning ani-

mal feeling attempts to escape her exposure and humiliation by abortion.

Teach eashty, teach restraint, but above all protect the devoted victim of her own strength or weakness in yielding to the eternal dominant impulse and enable her to pass through her gestation and delivery free from the lofty scorn and hypoerisy of an unsympathetic sisterhood.

CRIMINAL ABORTION; A BRIEF CONSIDERATION OF ITS RELATION TO NEWSPAPER ADVERTISING. A REPORT OF A MEDICO-LEGAL CASE.

BY RUDOLPH WIESER HOLMES, M. D.

Member of the Council Committee on Criminal Abortion, The Chicago Medical Society; Instructor in Obstetrics and Gynecology, Rush Medical College; Chief of the Department of Obstetrics, Augustana Hospital; Obstetrician, the Passavant Memorial Hospital; Associate Obstetrician, Chicago Lying-in Hospital.

The crime of criminal abortion is undoubtedly co-evil and co-extensive to illiet relation of the sexes. Although this statement is true the writer would not have anyone believe this latter practice particularly promoted the custom of destroying the unborn child. As in the past, so today, the deterrent factors to motherhood which lead women to interrupt criminally their pregnancies are the same. The ancient Roman women, both lady and harlot were accustomed to destroy their unborn in order to preserve their figures or for causes equally trivial, as virtue then was of a different standard than now, so abortion for the preservation of that virtue was not so often required. In our modern social requirements the causes which dictate the production of criminal abortion are more diversified. It has been stated that women in their business relations have not a keen sense of right and wrong, that is they have not a true financial integrity. If this is true, I am sure that her mind has an analagous bias when she is considered in relation to her desires to be aborted. It is a sad parody on the high virtue and purity of women that they do not see the evil they do when they

seek, and only too often secure, a criminal destruction of their unborn children. You all know the naive way, the insinuating manner with which our modern woman attempts to consort with her doctor in gaining her point: with one it is beginning connubial incompatibility, another has too many children already—this too many children includes one to a full dozen progeny, another had such a difficult labor last time that her doctor told her it would kill her to have another, again it is “money,” and the particularly candid woman will openly declare she hates children, and then finally the unfortunate turns up with her pitiable tale. The most deplorable part of this question is that these requests do not come from the wanton, the women who really are carrying burdens beyond their strengths, or the poor, but the better educated, the women of society, who are the most persistent transgressors. I am very positive that only too often doctors are directly party to the crime by offering the vapid excuse that the woman’s health would be compromised by a pregnancy: such an argument ought to be characterized as in the domain of criminality unless the operation is done openly after due consultation with at least one other physician.

After some years of close professional association with the pregnant the writer has become convinced that abortions among the better classes are essentially brought about by one group of causes, which may be denominated social ones: the writer firmly believes that where one abortion occurs from the diverse pathologic causes many more are produced by the abortionists’ instruments, drugs, or other measures. In a half serious, half jocular vein, I stated to the Chairman of your Committee on Criminal Abortion that I almost had come to believe that the sole cause of early interruptions of pregnancy was indelibly associated with criminal intent—that the diverse pathologic conditions discussed in our text-books as etiologic data were merely matters of fiction: in the same spirit he said he almost thought so too.

We feel that education is absolutely indispensable to a proper realization of the heinousness of destroying the unborn child;

the physician is the one above all others who may be the most influential in deterring women from having their desires fulfilled. Well directed arguments concerning the dangers of having the operation done are to my mind more effective than too strong presentations of the moral aspect—so soon as we present to the woman that she is doing a criminal offense, is breaking a moral law, we arouse her enmity from the suggestion implied that she is immoral or a criminal. We all feel the revolting, debasing instinct, and the inhumanity which will prompt a woman, usually an unfortunate outcast, who will kill her new born child, or forsake it to die from exposure, but so long as the child is in utero, and the earlier the gestation is, with greater equanimity the public looks upon the destruction of the growing fetus. The Common Law which is founded upon ancient and medieval custom has fostered the belief that the fetus did not have life until quickening was noted by the mother. To this day the states of Connecticut, Mississippi, Minnesota, Arkansas and Oregon accept this obsolete interpretation of the common law in their statutes: other states and most countries by legislative action have removed such absurd qualification as “quick with child” from their statutes defining criminal abortion. Although this really nonsensical belief that the fetus is endowed with life by the accidental circumstance of the mother feeling fetal movements has been done away with in medicine, law and theology, the laity still tenaciously adheres to the old idea with ulterior motives.

The present law in this state, as in nearly all other states makes a great distinction between an abortion which does not destroy the life of the mother, and when she dies; the former is the felony of abortion, the latter is the felony of murder. Such a law is discriminative; as infanticide is murder, so should foeticide be murder; the abortionist directly, maliciously, with “malice aforethought” deliberately kills the fetus, while it is far from his intention to kill the woman.

We are quite positive that the daily papers, magazines, and even some so-called religious papers are most fruitful means of disseminat-

ing the knowledge concerning the means for producing abortion, by covertly suggesting where the appliances may be obtained, the drugs bought, or even the instrumental methods may be carried out. There is hardly one daily paper, even it would be better to state that there is not one daily paper in Chicago which does not regularly print a list of advertisements of professional abortionists. We (and *we* comprise physicians and laity) all know what is meant when these phrases are used in the daily press: "Our monthly regulator is the only reliable remedy for delayed periods," Jones' "female regulator," "\$1,000.00 for any female disorder our method fails to relieve," and the host of others which invite seekers to their lair. The popular understanding of these advertisements is that they are merely bids for abortion work. We all know that the publishers and editors must be fully cognizant of the purport of the wording; in private these men would not stultify themselves by such declarations of ignorance, but as the veiled wording is an indispensable prerequisite for such public announcement, they hide behind a subterfuge. I have been credibly informed that one of our daily papers, one generally credited a clean sheet, nets a clean (or better unclean) profit of over \$50,000.00 a year from questionable advertisements. This same paper contains the notice of one midwife who has served time in the penitentiary for abortion-murder, and two others who have been indicted by the Grand Jury for the same offense, and yet they still are plying their trade without fear of the Board of Health or the State's Attorney's office. I would not for one moment imply that this paper I have in mind is the worst—far from it, it only does what the others are doing, and reaps the same reward as do they.

It is of interest to quote verbatim the statute anent the publication of these fraudulent and criminal advertisements: in the Revised Statutes of the State of Illinois, 1903, under the caption of Abortion (Div. 1, para. 6) occurs this: "Whoever advertises, prints, publishes, distributes, or circulates, or causes to be advertised, printed, published,

distributed, or circulated, any pamphlet, printed paper, book, newspaper, notice, advertisement, or reference, containing words or language, giving or conveying any notice, hint, or reference to any person, or to the name of any person, real or fictitious, from whom, or to any place, house, shop, or office, where any poison, drugs, mixture, preparation, medicine, or noxious thing, or any instrument, or means whatever, or any advice, information, direction, or knowledge may be obtained for the purpose of causing or procuring the miscarriage of any woman pregnant with child, shall be punished by imprisonment not exceeding three years, or a fine not exceeding \$1,000.00." This paragraph clearly places the onus upon the abortionists and the newspaper management, each being equally culpable. And not only has the State prohibited the circulation of such fraudulent notices, but also the United States Government, through the Postal Department, has passed most rigid rulings, prohibiting their transmission through the mails, whether sent as a part of the newspaper, or under separate cover as circulars. If this national law were rigorously observed it is safe to say almost every newspaper in the country would be refused all postal privileges. That a veiled advertisement may be brought in as evidence of the criminal intent of the abortionist has been amply settled in Massachusetts, and would undoubtedly be accepted in the courts of other states. "In *Commonwealth vs. Barrows* (Jour. American Med. Assoc., p. 1618, June 23, 1900) a prosecution for abortion, exception was taken to the admission in evidence of certain cards found in the defendant's trunk, in the room occupied by him: also, to allowing the district attorney to argue to the jury that the defendant, by the cards, advertised his business as that of an abortionist. But the Supreme Judicial Court of Massachusetts overrules the exceptions with the statement that it has no doubt that the cards were admissible in evidence, and that the district attorney was properly allowed to argue to the jury what their meaning was. It says that in such cases cards and circulars of a defendant have been held to be admissible in evidence if they tend to show that the defend-

ant holds himself out as a person whose business is to procure abortions. It is not to be expected that cards and circulars of this kind will state the fact in precise terms, or that their meaning will not be more or less disguised."

In connection with the laws prohibiting the advertisements of abortionists it is of interest briefly to review the laws concerning the sale of abortifacients. In paragraph 4 of the same section (Div. 1) we find this: "If any druggist, dealer in medicine, or other person, sells to any person any drug or medicine, known or presumed to be ecboic or abortifacient, except upon the written prescription of some well known and respectable practicing physician, or keeps on hand, or advertises or exposes for sale, or sells any pills, powders, drugs or combination of drugs, designed especially for the use of females, without keeping the certificate as required in the next succeeding section, he shall for each offense be fined not less than \$50 nor more than \$500, or be confined in the county jail not less than 30 days nor more than six months, or both; Provided, This section shall not be construed to apply to compounds known as "Official." The next section (5) specifies that all drugs particularly used by women, or intended to be used by women, shall only be sold when the vender has a certificate specifying the ingredients of such medicine, signed by two reputable physicians resident in the county where the article is to be sold.

I believe this section is practically nugatory on account of the concluding sentence, "Provided, This section shall not be construed to apply to compounds known as 'Official.'" As so largely the drugs which are presumed to be abortifacient are official the sellers are at once relieved from incrimination: Further, as only too many of the professional abortionists' concerns employ a physician upon whom they may fall back, they are protected—in the eyes of the law they are reputable, even though the profession consider them without the pale of respectability. In questioning a number of druggists on the points of these sections I was surprised to learn that they were in complete ignorance of the law: one druggist informed me he did not believe there

were a dozen pharmacists in Chicago who had the certificates, and they probably had them to protect themselves in the pinch. In conclusion, the section sanctions the sale of abortifacients, and their advertisements, provided the proper certificate is on file; this is so since largely the drugs sold for the use of females are ecboic in purpose, if not character. It goes without saying that some patent medicines are purely for the relief of "female weakness," but to have an efficient law controlling the sale of ecboics would almost certainly seriously jeopardize the legitimate sale of the former.

As the laws of this country prohibit the transmission of such advertisements through the mails, as the laws of this state prohibit their publication, and their sale, and as a Supreme Court of one of our states has handed down a ruling giving a judicial interpretation to the veiled wording, it would seem that only one more thing is needed to complete the circle, and that is an aggressive prosecuting attorney, backed by a strong, active organization as the Chicago Medical Society. Then only will we have a clean newspaper which will present the same purity in its advertising pages as in its news columns, and the flaunting advertisement of the abortionist will be eradicated.

A CASE OF CRIMINAL ABORTION.

Through the courtesy of Dr. J. V. Fowler, who asked me to see the patient with him, I have the privilege of reporting the case. As the case offers some interesting medical points and varied jurisprudential aspects it is expedient to divide the report under the several headings.

MEDICAL ASPECTS.

On Tuesday, July 5th, Mrs. S., para II, in the fourth month of her pregnancy, was subjected to a criminal operation at the hands of a midwife: on Wednesday, the midwife removed the small vaginal tampon and tent with which she had terminated the pregnancy: the small fetus came away immediately thereafter. On the 8th, at 3 A. M., Dr. Fowler was called. The woman was suffering with severe abdominal-pelvic pain, and was frequently disturbed by violent attacks

of purging and vomiting; she already was extremely prostrated—was fully conscious: her pulse was 120, and temperature 98. The os admitted one finger readily; an odorous sero-purulent lochia was discharging from the vagina. The uterine cavity appeared to be free of all decidual remnants, with a roughening on the posterior wall, the site of the developing placenta. By 4 p. m. there was a marked amelioration of the pelvic pain; however, she now complained of a severe headache: at this time she was somewhat somnolent: the temperature was still normal.

On Saturday the pulse had dropped to 100—the temperature was again found normal: the stupor was more intense; it was evident that she understood remarks addressed to her although she made no attempts to speak: by 5 p. m. her condition was essentially the same as in the morning. At 9 p. m. I saw Mrs. S. for the first time: she then had a normal temperature, and a pulse rate of 96 which was full, strong, and regular. Mrs. S. acknowledged the introduction to me, by greeting me with her left hand: again she gave evidence of an aphasia. At this time the first signs suggestive of an hemiplegia were ascertained. Locally it was clearly evident that peritonitis was not present: the uterus was soft, boggy and evidently one which was undergoing puerperal changes. A culture taken from the uterus showed a growth of *Colon Bacilli* in almost pure culture. At this time it was determined that she had a septic abortion, with a metritis: no evidence of peritonitis: the next day was added that she had a septic embolus with a brain abscess. Mrs. S. died the next morning, Monday, at 4 o'clock.

POST MORTEM EXAMINATION.

The examination was made by the coroner's physician about ten hours after death. A frothy blood escaped from the abdominal—thoracic incision.

Kidneys. Acute parenchymatous nephritis: double pyelitis.

Liver. The organ was large and soft, necrotic spots were visible; a diffuse suppurative hepatitis had already well advanced.

Lungs were filled with a purulent fluid, giving evidence of a beginning pneumonia.

Heart was normal.

Cranial Cavity. On lifting up the brain the base was found bathed in pus—a basilar meningitis. On sectioning the brain both lateral ventricles were filled with a cloudy fluid, that of the left being distinctly purulent. In the left hemisphere, external to the lateral ventricle, was found the cause of the hemiplegia—an abscess the size of a walnut.

Uterus. The uterus was six inches long, from external os to the fundus: the cavity was covered with a thick pultaceous coating, containing necrotic areas: on the posterior wall, at the placental site, were a few small shreds of placenta: the offensive odor was still much in evidence. The walls were soft. The left ovary contained a small abscess, holding, perhaps, five or ten drops of pus: the right was normal. No evidences of peritonitis were found.

The chief medical points of interest were as follows. The most striking fact was the extremely rapid production of the brain abscess: the abortion was performed on Tuesday; on Friday, at 3 a. m., the puerperal endometritis was fully developed: by 9 a. m., she complained of a headache, which was undoubtedly the first premonitory sign of the abscess; by evening the woman was lethargic, and on Saturday evening the hemiplegia was fully developed; and on Monday death supervened. The temperature was essentially normal during the entire course with the exception of the morning of the first day she was seen, when it was 100, and on the last day when it rose to 102.5°. The pulse, rapid at first, declined to the nineties on the second day she was observed, and so continued until the end. At no time was there delirium. Were the uterine and cerebral infections synchronous, or was the uterine involvement primary, and the cerebral secondary by an embolic process? If the former were the case, then the embolus must have entered the circulation at the time of the operation, or at least very shortly thereafter: if the latter

supposition is correct, then the infection must have been a most virulent one. Finally, as the course of the illness was so rapid we might surmise that the criminal operation and its consequences, and the brain inflammations were merely coincidences.

JURISPRUDENTIAL ASPECT.

Late in June, 1904, Mrs. S., accompanied by her sister, visited Mrs. A., a midwife, making arrangements to have herself criminally aborted. On Tuesday, July 5th, at the time arranged she returned alone, at which time Mrs. A. carried out Mrs. S.'s desires: on Wednesday, the midwife visited Mrs. S. at her home, and proceeded to remove a small vaginal tampon and a tent; immediately thereafter the fetus was expelled: the tampon, tent, and fetus were shown to the sister by the mid-wife, with this remark: "With these (designating the two former) I brought the baby." At the Coroner's inquest Dr. Fowler gave in his testimony the salient facts of the case so far as he knew them: this testimony included the fact that Mrs. S. had fully informed him that the cause of her illness was the abortion produced by Mrs. A. The sister detailed her knowledge of the affair, which comprised the facts mentioned. The woman was held to the Grand Jury without bail.

The Grand Jury failed to vote a true bill, so Mrs. A. was at once released from jail. It was a very peculiar train of circumstances that the details brought out at the inquest were not presented to the Grand Jury. This was particularly strange as the writer who first gave his testimony, alluded to the facts presented at the inquest, which was replied to by the interrogator, "Well, that will come out in the evidence, won't it?" But it did not!

As the medical aspect of the case was fraught with so many technical details and as it would have been a very difficult thing to prove to a jury that the brain abscess and meningitis were directly sequential to the abortion, Dr. Fowler and I decided it would be a useless waste of time and energy to attempt to have the States Attorney's office reopen the case. You all are aware of the mess

which may occur when medical experts discuss moot points in court. Nevertheless, we feel confident that the evidence was sufficiently strong to warrant a judicial decision in the case, and that it was an error to have failed to indict her, especially as the incriminating evidence was not developed. Although it would be almost impossible to convict this woman of murder, her history as an abortionist should demand her conviction on the lesser charge of producing the abortion with criminal intent.

Since the events herein recorded occurred the writer has learned these facts about the midwife: Within a short time after her release from jail she went to a drug store kept by X, and there bought a supply of tents—even the fearful strain of a murder charge against her did not deter her from continuing her nefarious career. Dr. B. who saw these articles sold to Mrs. A. has handed me the written data of three women who died as a result of criminal operations at her hand. He was called to these cases by members of their respective families; but as soon as the midwife heard of his attendance he was summarily discharged, and Dr. Z. who is her refuge when danger comes in cases of like nature, signed the death certificates. Dr. B. who is a man of unimpeachable veracity, informs me that he probably can discover about ten other women who died as a result of criminal abortions produced by this same Mrs. A.

In conclusion the writer would state his belief that the time has come for the Society to take an active part in aiding the prosecution of notorious abortionists: this may be done in various ways: 1. By bringing moral suasion upon newspaper managements so they will refuse all advertisements of a suggestive nature: a committee of this Society might act as an advisory board of censors. 2. By working in friendly conjunction with the State Board of Health, the city health department, the States Attorney's office, and with the coroner. If work were carried on along these lines an enormous amount of data would be collected which would be of inestimable value to the several legal bodies.

387 North State St.

CRIMINAL ABORTION AS IT COMES BEFORE THE CORONER'S OFFICE.

BY JOHN E. TRAEGER, CORONER COOK COUNTY,
CHICAGO.

I want to express my appreciation of your kind invitation to be with you tonight, and while I have had the pleasure of meeting a number of your members personally, this is the first opportunity where I could meet you when your hands were not full of instruments and where the atmosphere was not laden with the odor of ether.

The nature of my duties as Coroner of Cook County has brought me in contact with the medical profession a great deal during the past four years and I know from experience and observation that we have in our city some of the brightest medical minds this country can boast of and if it were not for the fact that I feel perfectly at home in the midst of a gathering of physicians, I might feel a hesitancy in appearing here tonight and speaking on a subject that I feel is a growing worry to the up-to-date physician who has the welfare of the motherhood of our country at heart.

Before my advent in the coroner's office I had a little or no opportunity to know to what extent criminal abortion is practiced, especially in a large cosmopolitan city like ours and it struck me as it would any layman suddenly thrust in a position that would bring him face to face with the evil; and I was not very long in office when I began to be amazed at the alarming frequency with which abortion cases appeared on our records and resolved to do all in my power to stop it as much as possible. I found after a great deal of investigation that many of the abortions were performed by midwives who made a specialty of it and whose business cards announcing their vocation could be found in some of the houses of ill-fame in the city, being distributed by the landladies or inmates to the young men, or old men for that matter, who might sometime want that kind of service. In consulting the records of the office, I found that there had been very few persons

held to the Grand Jury and fewer still ever convicted of the crime of criminal abortion. This news discouraged me a little but I resolved that we must and would find a way to stop it and I want to say, gentlemen, that during the past four years, four of those midwives have changed their residence and if they are now performing abortions they are doing it inside the walls of Joliet Penitentiary, sent there with the assistance of the coroner's office.

The last woman we helped to convict, I believe our friend Dr. Bacon remembers, she performed an abortion on a patient of his and the Doctor was afterwards called in. The midwife's name was Jahnke and she lived somewhere on the north side. To give you an illustration as to how bold some of them operated I will cite this instance. The case I refer to was reported to our office some time in the afternoon and the inquest set for next morning at 10 o'clock, during the afternoon and that night the police had not learned who performed the abortion and had made no arrests. About 2 o'clock the next morning when everything was quiet and still, I was awakened out of a sound sleep by the furious ringing of the telephone bell; I jumped out of bed half asleep, thinking that some frightful accident had occurred to necessitate calling me out of bed at that unearthly hour, and went to the telephone, a female voice at the other end of the wire gently inquired if that was Dr. Traeger. I informed her that it was Coroner Traeger. She then volunteered the information that a young lady had died on the North Side the day before and inquired if I "could do something." After a vain attempt to pin her down as to what she meant by "do something" she said she would call and see me, at my office, in the morning. The next morning I arrived at my office earlier than usual, but found my telephone caller of the night before patiently awaiting my coming. She told me of the case, that she was a midwife, that she had been attending the woman and that her patient had died, also that the authorities had charged her with performing an abortion, but she protested her innocence, saying she had been charged with the offense before.

but had always been able to fix herself with the coroner—But Mrs. Jahnke is now a resident of Joliet and if the Pardon Board does not interfere she will be there for the next fourteen years.

Another case I have in mind was one that occurred about two years ago, a young girl eighteen years old, the daughter of a retired farmer, living with her parents in a small town about 40 miles down the state, died in a hansom cab shortly after being placed in the vehicle by a woman who told the driver to take her to a number on West Madison St., that proved to be the home of her relatives. The driver shortly after leaving the house heard the girl fall on the floor of the cab and fearing something was wrong drove to the East Chicago Avenue Station; at the station it was discovered that the girl was dead and the body was removed to an undertaking establishment in the neighborhood. The police arrested the woman who proved to be Mrs. Scheniert an old offender, she denied performing an operation, claiming the girl came there a day or two before, suffering from the effects of an operation and seeing she was growing rapidly worse and fearing the young lady would die in the house she called the cab with the result stated. Letters found among the effects of the dead girl disclosed the man in the case, a young barber living at Beecher, Ill. A detective was immediately dispatched to Beecher, located the young man and informed him that the young lady was in trouble in Chicago and wanted to see him; he readily accompanied the detective and arrived in the city in time to attend the inquest, he was not placed under arrest as we wanted his testimony to hold the midwife. He told the story of how he brought the girl to Chicago, her parents thinking she was visiting her relatives on the west side, how he brought her to the house of Mrs. Scheniert and arranged for the operation and her board, paying \$25.00 for the service. His testimony enabled the jury to hold the midwife to the Grand Jury and they also held the young man as an accessory. He laid in the county jail for six or eight months and was tried with the midwife and found not guilty, but the woman was convicted and is now in

Joliet. The conditions surrounding this case were rather out of the ordinary, the girl was an only child and her father left the farm and moved into town in order to give her the advantage of the schools in town, the young man lived in a neighboring town and was considered a model young man, he was a welcome visitor at the young lady's home, the father told me he looked upon the young man as his prospective son-in-law.

The first year of my term we investigated 42 cases of criminal practice, the second year it fell off to 27, last year it was further reduced to 18, this year it will reach 35 which is an increase of nearly 100%. We held six midwives and one physician to the Grand Jury this year and have already convicted two.

In investigating the cases of abortion that came to our office we find that the cause for the act differs in most every case, that is, among married women. Some cases on account of poverty, others on account of children coming too fast, the society woman, who has not the time to devote to maternal cares and last but not least the dwellers in the modern flat. It has got so nowadays that a married couple with babies is denied admission to an apartment house or flat building, and it is my honest opinion that the attitude of the present day landlord in refusing to rent to families with small children and allowing that impression to go out boardest is indirectly the cause of much of the criminal practice in this city. But I think the discussion as to the causes of the practice and its cures can be more safely left to some of the physicians present as they have a better opportunity of learning those things. All I can say is that I think it is your duty and mine to try and check the practice—yours by advice to the women that come to you for assistance and mine by punishing the guilty who have violated the law.

As one who sees in the growing desire of the American woman for small families—and no family at all—a menace to the continued greatness of the American people, I think your Society does well to bring this subject of abortion up for public discussion, so that our civilization in its rapid onward march,

may not find it necessary to sacrifice its future manhood and womanhood in order to keep up with the procession.

I know that the cases that reach me in my official capacity are but a small percentage of the whole and it is not my desire to condemn the poor unfortunate that may be compelled by force of circumstances to submit to the ordeal. The young girl in the small town who is led from the straight and narrow path and to hide her shame is compelled to come to a large city, there to be lost in the whirling eddy of humanity, where she either leaves the house of the midwife a physical wreck or finds a resting place on a marble slab in the Cook County Morgue: to these poor victims of circumstance I have but a pitying tear but for the human vultures that thrive off their shame and disgrace I never did and never will show mercy and I consider the brightest page of my record as coroner of Cook County, the one containing a list of the midwives I assisted in sending to Joliet Penitentiary for the practice of criminal abortion in Cook County, and I sincerely trust that the Chicago Medical Society will co-operate with the proper authorities with a view of stamping out the evil as much as possible.

THE COMMON AND STATUTE LAW OF ILLINOIS.

BY MR. J. M. SHEEAN, ATTORNEY FOR THE
MEDICO-LEGAL COMMITTEE OF THE
CHICAGO MEDICAL SOCIETY.

Mr. President, Ladies and Gentlemen—Within the brief time allotted to me, I think I can do no better than to attempt, in a hasty and desultory manner, to review the history of criminal abortion. As has been stated tonight, the decisions and enactments on our statute books are but reflections of the public conscience as it existed at the time of such enactments at common law, and by common law I mean ancient precedents, the decisions or dicta of courts, not founded upon any enactment of any legislative body, and at common law abortion as a

crime was not known as a distinctive, separate offense. The theory of the ancient English law was that, as Dr. Bacon has explained this evening, life was held to begin only at the quickening, and until such time no offense could be committed by an operation that led to the premature delivery of the fetus. Such was the condition of affairs of the common law until comparatively recent years. No offense of any kind, with the woman's consent, was recognized as punishable. If without the mother's consent abortion was brought about, simply the assault was punishable. The child was not in existence or held not to exist so as to be the one against whom an offense could be committed until there was actual quickening in the mother's womb, so that the law remained until a short time prior to the separation of this country from the mother country. Then, certain statutory enactments were passed in England which did not become a law in this country, but which were followed in many states. Thereby it was made an offense or a misdemeanor merely to commit an abortion or to induce a premature delivery even though the child had not quickened. In addition thereto there was a provision that if the death of the mother resulted, murder was the crime committed by one who was either principal or accessory.

Coming down to our own state, which originally adopted the common law, so far as it existed up to the fourth year of James I, we find this condition of affairs until our first criminal code was enacted, namely, that abortion was defined in a manner slightly different from the crime as it exists upon the statute books today. I never attempt to quote statutory definitions from memory; but until 1867 the crime of abortion in the State of Illinois was defined as follows: "Whoever by means of any instrument, medicine, drug, or other means whatever, causes any woman pregnant with child to abort or miscarry, or attempts to procure or to produce an abortion or miscarriage, unless same were done for *bona fide* medical or surgical purposes, shall be imprisoned, in the penitentiary," etc.

This statute remained until the year 1867,

that is, any abortion or miscarriage brought about, committed, abetted, or advised by any person, unless it be for *bona fide* medical or surgical purposes, was punishable as a felony. Under that statute it was a comparatively easy matter to show, in case a prosecution was attempted, if an operation was done for *bona fide* medical or surgical purposes; and, therefore, in 1867 the legislature changed the statute and enacted it as it now stands upon our statute books, and in lieu of the words "for *bona fide* medical purposes" the provision in the Illinois statute reads, "unless same were done as necessary for the preservation of the mother's life," and not for *bona fide* medical or surgical purposes, which is uncertain, unbounded, undefined, but strictly limited to the one specific purpose, the one specific thing that will excuse the offense defined as abortion, namely, that it shall be necessary for the preservation of the mother's life.

In a prosecution commenced under the present statute the indictment as framed must specifically charge that the operation was not necessary for the preservation of the mother's life; the burden of proof is upon the state to show that an operation was not necessary for the preservation of the mother's life. In the absence of any circumstances tending to show that it was reasonably necessary to perform such operation, the law is complied with. In interpreting the words "necessary for the preservation of the mother's life," it has been held that it must be an actual physical necessity, on account of the mental depression which may arise because of the unfortunate condition of the mother. The threats of suicide, the probability of insanity, the probability of the nervous condition in which the mother at that time finds herself because of her surroundings, because of brooding over her condition, are not within the medical law, and conditions that will justify a physician or surgeon in saying that it is necessary for the preservation of the mother's life that her child should be destroyed, so that the courts have held in interpreting those words, and have properly held, that it must be an actual physical condition which renders improbable the

continued life of the mother unless the life of the child be destroyed.

Dr. Bacon has suggested many propositions with reference to the common and statutory law on criminal abortion that are not only of interest to the profession, but of general interest. It is, of course, true that this offense must in almost every instance be established by purely circumstantial evidence. It is almost impossible to establish this crime in any other way; and, therefore, the law books are full of cases reciting all the facts and detailing the histories of various crimes, and in the end determining that circumstantial evidence was in this or that particular case sufficient or insufficient to justify a conviction. From the very circumstances which usually surround the commission of an offense of this character, circumstantial evidence, as a rule, is the only evidence available. So, too, as Dr. Bacon has suggested, the question of the admissibility of a dying declaration is one of supreme importance both to the medical and legal professions and to those interested in the enforcement of this particular law, and the law of many of the states has made the distinction which Dr. Bacon made in his discussion, that a dying declaration is admissible only in case of homicide, and if the prosecutor, where the death of the mother has resulted from an attempt at abortion, should see fit to indict for abortion as distinguished from murder, the dying declaration of the mother would be inadmissible. Upon an indictment for murder her statement as to the facts as to the person accused of the crime would be admissible, with force and effect, if delivered under oath in open court. It has been held in this state that a dying declaration in a murder case alone, when corroborated by facts and circumstances, was sufficient to justify a conviction and imprisonment in the penitentiary. Furthermore, proof of motive for the commission of the crime presents an interesting question. The fact is, where the death of the mother has resulted, efforts will be made to prove the relationship that existed between her and the defendant who is charged with the crime and who is standing trial at the time. The fact that

there had been illicit intercourse between them, and a mutual desire to conceal the evidence of their relationship, will permit proof that ordinarily in the trial of criminal cases would not be permitted. It is necessary always to establish proof of the intent to commit an abortion. In an early case in the State of Illinois where a husband had committed an unjustified assault upon his wife during her pregnancy, and had beaten her so brutally that it resulted in a miscarriage, there was an effort in this State made to convict him under the criminal code of the offense of abortion; but the Supreme Court held that before there could be conviction it was necessary that the intent to commit this specific offense should be established. While the assault was brutal, and the husband violated the criminal code in committing the assault, still he could not under the wording of the statute be held guilty of the offense of abortion. In a later case, in which it was sought to convict a doctor of abortion, the doctor was called in during the confinement of a patient. He made an incorrect diagnosis, and, it is said, treated the patient in a manner unjustified by good practice of the profession, which resulted in the destruction of the fetus, and a conviction on the charge of abortion was admitted. The Supreme Court held in this case that the necessary element of intent was lacking; that no matter how unskillful the doctor was in the performance of his duties; that no matter how careless or negligent he was in what he did in his efforts to treat this woman, there was no proof of the necessary intent which must exist before a criminal offense is committed. The Supreme Court, in holding that the crime of abortion was not established in this case, made use of the following language: "If physicians and surgeons can be convicted of manslaughter and sent to the penitentiary on such evidence as this record contains, there would soon be a frightful devastation of their ranks."

Whether or not the reasoning of the Supreme Court be proper or improper, there can be no question as to the correctness of the conclusion that they reached.

I have already trespassed upon your time

longer than I had intended; but, as I said in the beginning, all I could hope to accomplish was to review hurriedly the common law, the English common law, the common law originally adopted in this country, the first statutory modifications, and the present statutory offense as tending to demonstrate the growth and development of the public conscience. Such has been the development of the human conscience as evidenced on the statute books and by decisions. Such is the present attitude of the courts upon the proposition. Whether the practical enforcement of the law as it stands is to be brought about, is dependent upon public desire, upon public demand, that the law as it stands shall be strictly enforced. The law itself is as far advanced as the public conscience. Indeed, the law as it stands is further advanced than apparently the public demand for its enforcement would require, and so if anything is to be accomplished, it is not to be done by appeals to the legislature for modifications of the law at this time: it is not by making appeals for more stringent laws, but it is by so stimulating the public conscience as to require and demand that the law as it stands today should be strictly enforced. (Applause.)

Harold N. Moyer, M. D.: Mr. President—This question is so intimately associated with the topic under discussion that Dr. Bacon asked me to discuss for a few moments the question of the privileged communication or the medical secret. This is one of the most important factors in the prosecution of the abortionist. Everyone within the hearing of my voice, who is a practicing physician, has at some time been the bearer of a medical secret in relation to abortion. Many have asked the question, What is my duty to the State, and to the individual? All feel the sacredness of the Hippocratic oath, an oath that is binding on the heart and conscience of every physician, though in this day it is not sworn as in olden times; to preserve the secrets inviolate that are entrusted to you in the practice of your profession.

It has already been stated that in this State there are no privileged communications, and it might be well for us to ask, What is a privileged communication? A privileged communication is one which is not subject to investigation by courts. It is a secret which the court respects and indeed will prevent the introduction of any testimony which should be privileged. We get the common law from England, and Illinois is what is known as a common law State in contradistinction to the code of

States. The common law had but one privileged communication, and this was not the result of a statute, but simply grew up as a part of the practice of courts. Communications between an attorney and his clients were regarded as privileged, and the reason of it is eloquently stated by Lord Bruce. "Truth, like all other good things, may be loved unwisely—may be pursued too keenly—may cost too much; and surely the meanness and mischief of prying into a man's confidential consultations with his legal adviser, the general evil of infusing reserve and dissimulation, uneasiness, suspicion and fear, into the communications which must take place, and which unless in a condition of perfect security must take place uselessly, or worse, are too great a price to pay for truth itself." All will agree that the communications between an attorney and his client should be sacred, and this sound doctrine will never be invaded. Under the common law that privileged communication was recognized as a benefit to the community. All should be able to go to a legal adviser, and not have the communication the subject of judicial inquiry. The Roman law had the same privilege for communications to attorneys, but the reason for it was different. Hageman says in his work on "Privileged Communications": The Roman law rejected the evidence of the Procurator or Advocate because of the identity of interest and of opinions and prejudices with those of the client.

Of thirty-eight States, nineteen have privileged communications as applied to medical communications. So far as the wisdom or unwisdom of the privileged communication as applied to physicians is concerned, opinion is about equally divided. The statute of New York State has been largely followed⁷ which says: "A person duly authorized to practice physic or surgery shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity, and which was necessary to enable him to act in that capacity." And it further says: "In no view does it protect consultation for criminal purposes."

Under the New York statute the questions relating to criminal abortion would be as difficult to decide as the knowledge that comes to a physician is always after the crime. The New York statute is defective in many particulars, and it may put a burden on the physician.

The privileged communication does not apply in this State, and that fact is not generally known to the profession. I have talked with many physicians on this subject, and most of them think it does. The relation of patient and physician is fully open to the inquiry of courts, and in revealing medical facts the physician assumes no responsibility. That is the law, and you can readily apply it to questions which arise in relation to criminal abortion.

Some years ago I urged a member of the Legislature to secure the enactment of a statute making the communications of physicians privileged. I now regret making such a request, and I am glad that it bore no fruit. If I heard of any attempt to have the Legislature

enact such a law, I shall certainly do my best to defeat it. It is not useful to the community, and it imposes a burden on the profession. France has the highest degree of privileged communications. They have gone so far as to make the revealing of medical secrets an offense under the penal code and the subject of damages in an action at law. Last year a suit was brought against a French physician for revealing the contents of a public document, a certificate sending a man to the asylum. The man brought a suit for divorce against his wife, and the evidence in this document was brought out at the divorce trial, the physician relying on the fact that its contents were known to a good many people, went on the stand and swore to the facts as they then existed. The physician was sued for revealing a medical secret. The lower court's finding was in favor of the physician, but the upper court reversed it, and said the physician must pay the man four thousand francs for revealing a medical secret.

In Massachusetts this matter has been thoroughly discussed in a paper by Cheever (Boston Medical and Surgical Journal, March 20, 1902.) He recognizes the evil of the privileged medical communication as shown in the working of the New York statute. Cheever says that a statute making medical communications privileged should have the following exceptions: (1) with the patient's consent; (2) to defend the physician when accused; (3) to expose crime. In all other cases professional confidences should be classed as privileged.

A statute with as many exceptions as that is full of holes. With the exceptions, it is valueless; without the exceptions, it is a menace to the medical profession. We can think of numerous instances in malpractice suits where the evidence that would save the case would be shut out under the privileged communication. The courts can be relied on to protect the community. A communication made under the seal of the confessional is not privileged, yet I have never heard of a court in this State attempting to invade the sanctity of the clergyman's office. The courts can prevent misuse of medical evidence, and an abuse of it for wrongful purposes, and the matter can be safely left in their hands. Let us have no privileged medical communications.

Discussion.

Mr. Fletcher Dobyns (Assistant State's Attorney): It was announced on the program that I was to open the discussion on this subject. I have not prepared a formal paper. I want to say at the very beginning in regard to what Dr. Holmes has just said, that I hope he will bring the case or cases that he spoke of to the State's Attorney's office, and I will promise him that they shall be taken before the grand jury and indictments voted in those cases. We will be very glad to do that.

I am informed that there are approximately from six thousand to ten thousand abortions produced in this city each year; and I am also informed that there are something like two hundred deaths from that evil each year. Coroner

Traeger has had something like thirty cases come to him as Coroner, which gives us some idea of the extent of abortion as a crime. There are very few cases, however, that finally come to trial in the Criminal Court and are prosecuted there. I suppose, in the last half dozen years, the number of cases have been very few that have actually reached the courts, and have been pressed to trial, and I believe it will be safe to say, although I have not looked up the exact figures, we can count on the fingers of one hand the convictions for criminal abortion that have been secured during the last half dozen years. This may not be exactly accurate, but it is not far from accurate from the investigations I have made. It would seem perhaps to those who do not come in contact with this phase of the evil that those who have charge of enforcement of the law have been derelict in their duty; but if you look at the matter from a given standpoint, you will see that this is not the case, because the State's Attorney's office can do nothing in prosecuting these cases until it has the evidence. Those of you who have appeared as witnesses in criminal cases, or have had anything to do with criminal cases, will realize the great difficulty in securing conviction in a criminal case. In a civil case all that is necessary is the preponderance of evidence. In a criminal case every material allegation in the indictment must be proved beyond all reasonable doubt, and the instructions of the court usually are "to a moral certainty." This defect with this provision of the criminal law is insisted on and reiterated to the jury, so you see the State's Attorney's office must have full and complete evidence of cases. Prosecutions fail frequently because of the fact that the evidence has not been properly secured. A physician, no matter how skillful as a physician usually knows but little of what is required in court. He studies the case only from the standpoint of the patient's welfare. If, however the law against criminal abortion is to be effective he must have in mind constantly the witness stand, the jury box and the law that governs the trial of criminal cases.

I think I could do nothing better tonight than to refer for a few moments to the manner in which the evidence should be prepared in these cases. If you are in court you will hear the court instruct the jury to the effect that every material allegation in the indictment must be proved beyond all reasonable doubt. If it is an indictment for homicide and not for abortion, that is easily proved; and that it occurred in Cook County, Illinois, is easily proved. But the next point, and a difficult one, is that you must prove in court that the woman was pregnant; it must be proved that an operation was performed for the production of the abortion; it must be proved that such an abortion was not necessary to save the life of the patient or mother, and that she died as a result of the abortion. In the case that has been referred to, it was shown by the testimony of the physicians who were called by the State, the physicians who had charge of the case, that it was about six weeks since pregnancy had begun. The doctor who had charge of the case told the jury upon ex-

amination that he had curetted the parts, but had not made a microscopical examination. Then a physician took the stand for the defense and testified that it was impossible to say whether this was fetal tissue or not without a microscopical examination, saying it might be some other form of enlargement.

Dr. Bacon: Hypertrophic endometritis.

The physician who took the stand for the defense said it would be impossible for a doctor, even after curetting the parts, as he said he did, to say whether it was fetal tissue or the tissue of a hypertrophic endometritis, and it was only necessary to raise a reasonable doubt, and the physician for the defense did not have to prove anything; all he had to do was to raise a reasonable doubt and get the jurors suspicious. It is absolutely necessary for a physician in making an examination in one of these cases to make it exhaustive and preserve his data, so that he can refresh his mind and be able to take the stand and say with absolute accuracy and certainty that there was pregnancy. All the other points in the case may come in, and, as in this case, other facts help us to prove to the jury beyond a reasonable doubt that pregnancy did exist. Then came the next point of proving to the jury that it was not necessary to save the life of the mother, and the doctor must be able when he takes the stand to tell the conditions and bear that fact in mind, and the treatment of the patient, and be able to say why and give his reasons clearly to the jury to show why it was not necessary to save the life of the mother. It is necessary to show that death resulted from the operation by which the abortion was produced. Another physician took the stand and showed how the same condition could have existed from something else, and that death could have resulted from other cause or causes. So it was necessary, therefore, to go into that subject and convince the jury that the death resulted from the particular causes alleged in the indictment, which was from the operation that produced the abortion. In the next place, it was necessary to show it was the particular person charged in the indictment. The physician ought to be extremely careful in a case of this kind to watch for every part of evidence bearing on this point. As Mr. Sheehan has said, and it is the law, if the indictment is merely for abortion, a dying statement cannot be used; but if the indictment is for homicide, which is the usual thing, it is a different thing. I do not know that there has been an indictment for years for simply abortion; it is usually for murder by abortion. Therefore, the attendants of a patient should try to remember every word the patient will say in regard to the cause, and particularly as to who caused it. In the case I have referred to the woman said it was the midwife, and there was considerable legal dispute over it, so that the jury had to be withdrawn, after which a long discussion followed as to the admissibility of one declaration in which was mentioned the name of the midwife. Let me say this in particular: It is not only of importance that the physician should notice what the woman says in court, what caused her illness, and who caused it, but

to know under what circumstances she said it occurred, because the court will give the greatest care to the circumstances surrounding the making of a statement, and whether she believed herself at the point of death, that she was about to pass away, and only under such circumstances can evidence be admitted. In this case it happened that she said, "let me have a priest; I am going to die."

I refer to these points because many of you gentlemen will, in the course of your practice, come across cases of this kind, and you may feel like complaining at the State's Attorney's office, at the Grand Jury, at the Court, upon the admissibility of evidence, or even at a petit jury for its verdict; but you must remember an old adage of the law, that "it is better a hundred guilty men should escape than one innocent man should be punished."

And unless every presumption of a man charged with crime and everything is proved against him beyond a reasonable doubt, it is absolutely impossible to convict him. The grand jury does not usually interpret indictments in these cases or in others unless it is reasonably certain that conviction can be secured, because it not only wastes the time of the court, the time of the jury, the time of the State's Attorney in preparing these cases, but it is a wrong to the men if we have not sufficient evidence to convict them to have them under indictment in jail or on bail. So you should remember this, and not, as I think is often done, complain at the State's Attorney's office or at the court, because the greatest care must be taken to protect the innocent. I believe the reputable, honest physicians, the men whom I have the honor of addressing here tonight, who, if they are called to attend cases of this kind, will watch the evidence from start to finish, and watch every point in a doubtful case, keep notes, so that they can refresh their memories when the time comes for trial, so that they can take the witness stand and testify with a certainty that leaves no room for doubt, I am sure in the future we will be able to secure convictions, and use the powerful arm of the law to secure a conviction and sentence to stop this crime that is working such devastation and desolation in this city, a crime that every pure man and every good citizen wants to see put down. So if the members of the medical profession will do this as carefully as they should, I am very confident that the State's Attorney's office will do its share in prosecuting these cases as they come to them. I hope that at any time (and I am speaking for my superior, Mr. Deneen, in this matter) any physician has evidence of any of these cases he will bring it to the office and lay it before the State's Attorney. Personally, I should be delighted at any time if any physician in the city of Chicago has any evidence on this point in a case of this kind, whether it is sufficient for conviction or not, I hope he will come and bring it to me personally, and I shall be glad to go into the whole matter, and if there is a possibility of conviction take the case before the grand jury. I speak for the whole office when I say we are willing and anxious to do everything to cooperate with you in this work. The witnesses

in these cases must be physicians, persons who can testify as to whether they saw a midwife there or a person at the midwife's office. We want the kind of testimony that is necessary to prove every material allegation in the indictment beyond all reasonable doubt. That is the kind of testimony that must be brought by physicians in the way I have said if we are to secure convictions in our courts before a petit jury. I do not think there is anything more I can add on this point. If there is any question in relation to this work and in connection with the State's Attorney's office I can answer, or I can be of any further service or assistance to you, I would be glad to do it. (Applause.)

Dr. M. O. Heckard (Registrar Vital Statistics, Chicago Department of Health): The few remarks I have to make will be in the nature of a negative report. The large majority of criminal abortions being known only to the parties criminally interested, recovery being rapid, and, in a measure, complete, the evidence never passes beyond these parties. The only points of interest, then from the Department of Health standpoint would be from the facts gathered from the death certificates as presented to our bureau.

The death certificates may be divided into two grand classes: (1) Those characterized by the information they contain, and (2) those characterized by the information they omit. I had a certificate presented to the department not long ago that told this story: Catherine ———, female, white, 22 years of age; born in Michigan; social status, single; resided in this city two weeks; occupation, domestic. This certificate came from one of the prominent hospitals, and was signed by a specialist. Now, what is the inference? Had this girl the means to come from another state to Chicago, go to one of the most expensive hospitals, employ the services of a specialist when she only earns perhaps a few dollars a week? Of course, when additional information was sought from physicians, they give as an excuse for not making a clear report, that the subject of the inquiry either carries the knowledge of the crime to her grave with her, or she takes the responsibility upon her own shoulders. She has relatives. Here is a girl from one of our best families who has made a mistake. There is absolutely nothing to be gained by advertising this case. The principal witness in the case has already been summoned before a higher tribunal. It is my duty as an attending physician in this case to report this matter to the proper inquisitorial officers, and have the distress of the relatives advertised, who are already bowed down with grief and shame? Of course, I would not hesitate a minute if there was any possibility of bringing the criminal to justice. But what can you do? The evidence is destroyed. If the physician does his duty to the law, makes this report directly to the Coroner, can he expect another call from that family or their immediate friends? And it is not every physician in the city who can afford to sacrifice a family under such circumstances. What can he do? He can at least make his report upon the death certificate; he can write the death certificate in such a way as

to disclose the facts, and the Health Department will step into the breach between physician and family, and take the responsibility of reporting that themselves. This is one of the duties of the Health Department.

There are three points of interest in every death certificate as presented for burial permit: (1) Does it contain sufficient evidence for a definite pathological classification of statistics? (2) Does it give information sufficient to afford the proper sanitary precautions against the spread of contagion? (3) Does it give sufficient evidence to prevent the concealment of crime?

The Health Department always stands ready to step into the breach to protect a physician who is willing to make this report, and I believe the channels prescribed by law are the proper ones to bring about this requirement. The press is a great factor in shaping public sentiment; but we are maintaining bodies at great expense for the very purpose of doing this work. They are ready to do it, but they must have the information. (Applause.)

Mr. H. H. Hart (Superintendent of the Children's Home and Aid Society) said the Society he represented and other similar organizations in Chicago were ever ready to act in such cases as had been referred to, and furnish the assistance and guidance that had been suggested by Dr. Bacon and other speakers.

Dr. Lucy Waite: I would like to say just a word on this subject from a woman's viewpoint. I take the liberty of rising at this late hour because I am sure the gentlemen will admit that this is a subject in which we women physicians as the champions of our sex are particularly interested and because so far no woman's voice has been heard in the discussion. I think the position taken by Dr. Reed in his paper does him great credit from a man's standpoint, but as women we feel that we have a right to demand for these so-called unmarried women, not charity but justice. I believe there is only one measure which can effectually solve this problem. Make parentage constitute a legal marriage contract and one of the principal temptations to commit criminal abortion will be abolished. This will protect the life and future good name of the innocent one of the three, the child, and will give to the mother an honored position in society and, incidentally, the father, also. It may be objected that this law would put some men in the position of bigamists, but we have a law covering bigamy and I think these cases would be very interesting ones to bring before the State's Attorney. So long as motherhood means disgrace to the young woman just so long will she take all the risks involved in destroying the life of the foetus, and in spite of the church, the state and the profession. She will always find some one ready to perform the nefarious deed.

As regards the attitude of the Catholic church on this question as explained in the eloquent address given to us by the Reverend gentleman this evening, while I believe that the uncompromising position taken by the church cannot fail to lessen this evil, as is also the case regarding her position on divorce, I cannot agree

with him when it comes to a question between the life of the mother and child. Nor can I think the case has been quite fairly stated. I would like to ask the Reverend gentleman if he were put in a position where by turning over his hand he could save a life and he refused to turn his hand over, whether or no he would feel that he were guilty of taking that life? This is the position in which the profession is put in regard to these cases. It is not a question of shall we commit murder, (if we must use so harsh a word) or no, but which one shall be murdered? We cannot claim that we are obeying the injunction against taking life by withholding our hands when it is within our power to prevent death occurring.

Mr. Charles Allen, Jr., Attorney-at-Law, spoke of the importance of having the managers of large daily newspapers, if possible, refuse to publish the advertisements of abortionists. The Philadelphia Public Ledger, the New York Tribune, the Boston Herald—representative newspapers—had taken the initiative in excluding such objectionable advertisements from their columns, and he hoped efforts would be made to influence the Chicago daily newspapers to do likewise.

Rev. Peter J. O'Callaghan: In answer to the question raised, If with two lives before me, by turning my hand I could save one, I certainly would do so; but I would admire anyone who, in order to save one, would risk his own life. But I do not think that the murdering of a human being is simply turning my hand; and if we could confine all the influence of our conduct and our lives according to our will, and volition, perhaps we might build round-about us a very high wall; we might isolate ourselves so much that the thoughts we think and the deeds we do would not help us to create the thoughts of future generations. No man yet lives who has the secrets of the Almighty in his heart and knows the worth of one of these lives.

Dr. Rosalie M. Ladova: Mr. Chairman, Ladies and Gentlemen—I wish to say a few words with regard to the subject under discussion. It is one of the great problems of the day and strikes at the very foundation of society and state, namely, that of home and family. We cannot be too loud in denouncing the existing evil, nor too painstaking in trying to eradicate it.

Two of the speakers made a plea this evening for the erection of homes for the care of unfortunate girls and women, so they can be delivered of their physical as well as moral burden, affording them the secrecy and safety their condition requires. This is well and good; such institutions are humane, and we should have them. These unfortunates are entitled to all the care and help we can give them as a matter of humanity, and institutions of this kind would undoubtedly save many a woman from a downward road to a life of shame and child murder. But they would not do away with the evil. In order to cure a social evil, it is necessary to pursue the same course we do in trying to cure a physical ailment. We want to strike at its very root, look to the cause, and endeavor to remove it.

The one great cause of all for criminal abortion is the lack of moral sense and responsibility. The following are the subsidiary causes: Too early and hasty marriages; lack of the true bond between husband and wife—love; extreme freedom afforded to young people at the courting stage, before they are old enough to exercise the self-control essential for moral conduct; extravagant tastes in mode of living, placing social obligations and pleasures of life above duty to family, state and to our own conscience.

In the unmarried, under-paid woman's labor, and too late marriages, as well as the great number of men who do not marry at all. In Europe, they cannot build foundling homes and homes for erring women fast enough. While they are humane institutions and laudable as a palliative measure, they are an encouragement to the unscrupulous man who has no affection in his heart and no sense of responsibility for his actions, to go on, taking the advantage of girls or women who are led astray through their ignorance, foolishness, or misguided affection, as well as to the woman who has no ideals to guide her in her conduct.

Young people should hear more of the sacredness of marriage, of motherhood and fatherhood. They should be taught that this world is not a doll-house for play and pleasure only, but that for every pleasure and satisfaction we reap there is a duty to perform. That motherhood is the highest privilege of woman, and that she owes it to her husband who toils in order to give her the comforts and safety and protection that she may devote her time to rearing of a family. What can we expect of a marriage contracted after three days' courtship, or between people in their teens? Is it a wonder that these short notice marriages feed the divorce court and later indirectly houses of ill-fame?

Whenever a young married woman comes to me with the statement that she does not like children and does not wish to have any, I question whether she loves the man she married. I firmly believe that a normal woman, who marries through love, is desirous of having an offspring. In European countries, where girls of good families are guarded by their mothers more than they are here, the broken hearts and spoiled lives are fewer. We have many good and noble men, but the majority of them will stand watching until the matrimonial knot is securely tied. Rosaline's attitude towards her ardent lover, as expressed in her saying, "First speak, and then kiss," is a wise and a safe one.

Our extravagant tastes are much to blame. Unless people are wealthy, they cannot afford to keep up with the high standard of living and raise a good family.

Among the wealthy society women the evil is most pronounced, as here the best and highest human instinct—motherhood—is sacrificed on the altar of vanity and social dissipation. Human conscience is silenced; woman's duty down trodden.

Under-paid woman's labor is a most potent cause of immorality, leading to the necessity of criminal abortion among the unmarried. Think of the army of young and attractive girls and women working down town in the factories,

stores and offices for a mere pittance, barely enough to keep them from starvation. Is it to be wondered at that they fall a ready prey to the man about town, who will lavish on them his cheap pleasures and favors? Think for a moment of the humiliation and degradation of the woman who sells her favors for a drink, a restaurant dinner, or a piece of jewelry! Think of the low state of moral development of the man who finds satisfaction and pleasure in such relations! There is nothing that will fill a person with more self-respect than the sense of financial independence and security. Woman's wages should be raised and their opportunities for earning an honest living should be promoted in every way, and we will save at least the greater and better part of them from humiliation.

Society should put a ban on the confirmed old bachelor, who scoffs at love and marriage, and preys on the underfed and under-paid womanhood, or alienates the affections of married women who are kept in comfort or luxury by their own friends. They are parasites on the body social, as long as they take no pride in supporting a wife and children, as is every man's duty before society and the state.

The pitfalls in the path of the self-supporting woman are many. It takes a sturdy heart and firm conviction as to what is the right and the safe course to pursue to withstand the temptations that are thrown in her way, often from the most unexpected sources.

The world is full of the so-called "free-lovers," who claim to be ahead of their times. But, alas! Free love is an ideal thing for ideal people in ideal times, but not for us. The matrimonial knot is still the best woman's protection, and I firmly believe that no woman in her right senses, who has any self-respect and pride about herself, will ever consent to enter into relations with a man, who does not think enough of her to call her his before the world, unless she is driven to it by force of circumstances. Financial security, pride and self-respect are the strongholds of woman's honor.

And what about confirmed old maids, someone might inquire? There are none. The spinster of sixty, who when asked as to whether she was married or not, responded, "I am not married yet," will stand approved.

I never met a woman yet, who would not cherish the hope of being a wife and a mother sometime in her life.

Physicians' duty with regard to criminal abortions. It has been my experience that many of the people who come to us with the request of having the operation performed do not know nor realize the gravity and dangers of it, either to themselves or to the physicians. By pointing out to them the risk of infection and fatal hemorrhage, as well as the gravity of the crime they ask us to perpetrate, we can get them reconciled to their condition, and persuade them to leave well enough alone.

I believe that in a harmoniously developed nature passions go with affections, and that it would take but little effort at self-control to come close to this ideal. Young people, when

in love, should be advised to marry, unless there are serious objections to their union. There are all grades of individual variations as to passion. Good health is consistent with sexual continence in many men, as well as women. Should a young man or woman come to us complaining of nervous disturbances, we should invariably inquire in a careful manner as to their emotional state, which is frequently the cause of the trouble. Always advise marriage. The physician, who will suggest prostitution for a young man, or "free love" to a young woman is in the wrong pew as an adviser. Low society is always degrading, and is fraught with dangers, physical as well as moral.

Anyone who listened to the discussion this evening, who does not know the facts, might carry the impression that it is only the midwives who are guilty of criminal abortion. To be frank with ourselves and square with others, we want to admit that we have black sheep in the family. Some of our professional brethren are buying apparent professional success at the cost of their manly honor. Why not clear our society which stands for the highest and the best where we gather for instruction and inspiration of these hypocrites, who, as the German proverb goes: "Oeffentlich pradtigt er Wasser und heimlich trinkt er Wein."⁴⁴

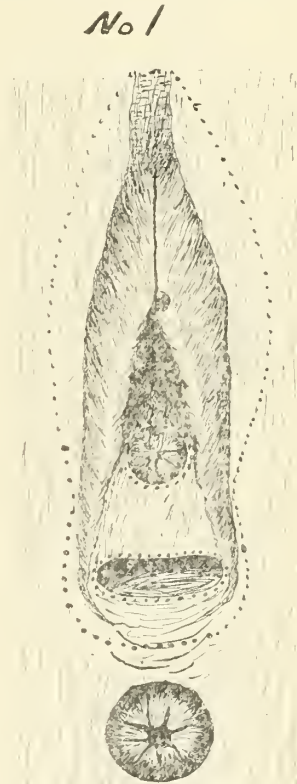
SURGICAL TREATMENT OF IDIOPATHIC PRURITUS VULVAE.

BY M. R. BARKER, M. S., M. D., CHICAGO.

One searching the literature relative to this subject, must be impressed with the idea, that the profession generally have not entertained the idea, that pruritus vulvae could be any other than a secondary condition. This idea prevails, possibly, because of the fact, that, frequently it is secondary to some easily demonstrated existing lesion. And to the further fact that some writers of note have connected the disease with some of the diatheses. For instance, G. de Mussey believes that the arthritic diathesis is a cause. By reason of these facts the treatment of this lesion, has been directed, properly, to the cause when ascertainable, and many times when the cause was not ascertainable, it has been taken for granted that the patient must have some constitutional trouble.

This paper does not deal with that class of cases, where the lesion is plainly a secondary one, but with cases in which there is no known primary lesion. In searching the literature we learn that more than half of

the cases that occur belong to the idiopathic class. This form of the malady has been called idiopathic for want of a better name. As a name it is inadequate and meaningless, so far as it conveys any idea of the pathological condition. Dr. Kelly of Baltimore believes the pathology to be a subacute inflammation of the deeper layers of the skin and of the nerve endings and calls the condition a dermato-neuritis. We believe Dr. Kelly



The dotted lines mark lines of incision.

is not far off the mark but the microscope has failed to reveal any satisfactory pathology in any case with which we have had to deal.

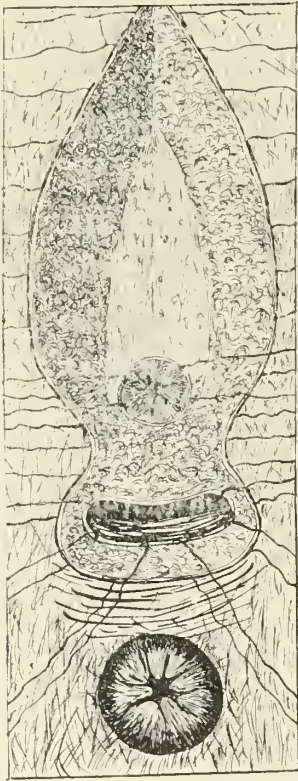
Whatever may be the etiology or pathology the condition is one of the most distressing that comes to woman kind, that does not directly destroy life and seldom yields to external applications or internal treatment.

The subjective symptoms are few, itching, burning, smarting comprise them all. The

objective symptoms are the worn and haggard expression of a patient tormented day and night, bereft of sleep, save that which comes from sheer exhaustion. It is peculiarly a disease of the old making its appearance after the menopause. An examination of the parts often reveals no abnormality. Some times there are whitish patches scattered over the vestibule which seem dry or parched but bleed freely if cut. Very fre-

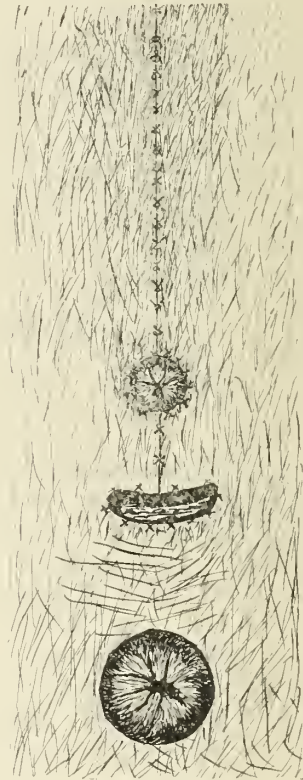
a treatment which in our hands has been uniformly successful and which so far as we have been able to find has not been described before. Dr. Kelly's operation described in his work on gynecology is the nearest approach to it. The procedure of which we speak seeks to remove all of the external organs of generation in every case, at the first sitting and is accomplished as shown in figure Nos. 1, 2 and 3. The first incision

No 2



Tissue removed and stitches placed.

No 3



Stitches tied, work completed.

quently there are long pinkish or yellow marks or excoriated spots due to the scratching of the patient. The tendency of the disease when established is to steadily progress and thus undermine the vital forces of these old people and make them an easy prey to other diseases.

We believe the successful treatment of this lesion lies wholly within the domain of surgery and the object of this paper is to present

surrounds the vaginal outlet at the hymen. The second circumscribes the meatus urinarius. The third commences at the junction of the skin and mucous membrane at the fourchette continues along the border of the cutaneous surface until nearly opposite the meatus urinarius, when it diverges so as to include the labia majora, minora and clitoris. If the skin is involved at any point the incision is made to include it. See fig. No. 1.

All the tissues included in these incisions are removed deeply. The denuded areas are covered by the easily movable adjacent, cutaneous surfaces, by buried silk-worm-gut sutures applied as shown in fig. No. 2. The completed work is shown in Fig. No. 3. Sometimes the cutaneous surfaces that are to cover that part of the vestibule lying between the meatus urinarius and roof of outlet cannot be brought together without too much tension on the stitches, dissecting up the flap on each side for a short distance will remedy the trouble.

We have now operated upon twelve cases in this manner nine of which have been operated two years or more without a return of the trouble in a single case. The first case was operated upon in 1893. We report this case somewhat in detail because it shows the development of the work.

Mrs. G. aged 73 years, no previous illness, never had a vaginal discharge. No lesion to account for the condition. Urine normal. Had complained of intolerable, itching, burning and smarting, for nearly a year about the clitoris. We followed, in this case, the plan of Schröder and Löhlein. (Pozzi Gynaecology vol. 2, page 422) and removed the clitoris and the adjacent tissues that seemed to be involved. The denuded place was covered with adjacent normal skin. The patient was relieved for three months when the disease appeared in the remaining mucous membrane of the vestibule above the meatus urinarius. At a second sitting this portion of mucous membrane including most of the labia majora and minora were removed and the denuded surface covered by healthy skin. The patient remained well for six months when the disease attacked the mucous membrane of the vestibule between meatus urinarius and roof of vaginal outlet. At a third sitting we removed all the remaining mucous membrane of the external genitalia commencing with an incision surrounding the vaginal outlet at the hymen. The patient had no recurrence of her trouble after the third operation to the time of her death seven years later. In this first case we performed the operation herein described in three sittings. We now always do the complete opera-

tion at the first sitting no matter how limited the diseased area may seem to be. Five others of this series of nine cases operated upon for two years or more were typical idiopathic cases and have had no return of the disease since the operation. Three of the series were distinctly of the arthritic diathesis and this may have been the cause of the trouble. There was no other lesion that could have caused it. Two of these were permanently cured. The third was not fully relieved at once but had a modified and constantly diminishing degree of the trouble for eight months when it disappeared and has not since returned. These patients were all between the ages of 63 and 76 years.

4625 Greenwood Ave., Chicago.

New Incorporations.

Friendship Sick Benefit Association, Chicago; not for profit; benevolent; incorporators, Emil Lainge, J. J. Lessohn, John Enosen.

Golden Cross College of Advanced Ophthalmology, Chicago; capital, \$2,500; educational; incorporators, J. Harraes, M. T. Bacon and J. S. Biesemeier.

Rex Bitters Company, Chicago; capital, \$5,000; manufacturing druggists and medicines; incorporators, George N. B. Lowes, R. D. Stephens, Albert Keepsecond.

Progressive Health Club, Chicago; promotion of the public health; incorporators, Mary A. Dean, S. H. Kloeber and Florence E. Brainerd.

Illinois Drug and Chemical Company, Chicago; capital, \$100,000; manufacturing drugs, chemicals and patented articles; incorporators, L. P. Crews, William A. Jennings and Daniel V. Gallery.

Drake Company, Chicago; capital, \$100,000; manufacturing medical preparations; incorporators, F. B. Kidder, C. C. Gilbert and D. D. Stansbury.

Star Remedy Company, Chicago; capital, \$2,500; manufacturing medicinal preparations; incorporators, G. S. Thompson, M. O. Naramore, and E. C. Crawford.

Dr. Earl Mayes has purchased the practice of Dr. McGinnis, of Dawson.

The physicians of Lincoln after several conferences have decided to advance the prices for their services fifty per cent.

The Chicago Homeopathic and The Hahnemann Medical college are about to consolidate and become a medical department of the University of Illinois.

The Aesculapian Society of the Wabash Valley

Founded 1846. Membership 200. Regular Meetings Are Held in May and November.

OFFICERS.

T. W. MOORHEAD, Terre Haute... ..President
H. McKENNAN, Paris.Vice President
M. A. BOOR, Terre Haute; F. E. BELL, Mattoon; C. BARLOW, Robinson;
E. S. ALLEN, Arcola and J. A. HOFFMAN, Pesotum.....Board of Censors

At the Fifty-eighth Annual Meeting held at Paris, the following Papers were read:

THE PRESENT STATUS OF THE GENERAL PRACTITIONER.

President's Address, delivered before the Aesculapian Society at the Fifty-Eighth Annual Meeting, held at Paris, Illinois, Thursday, October 27, 1904.

BY T. N. RAFFERTY, M. D., ROBINSON.

Before beginning my address, I desire to take advantage of this opportunity to thank you for the honor you saw fit to confer in electing me president of this Society, and I beg to assure you that in all my life I have never felt more honored than in being permitted to preside over your deliberations. For more than twenty-five years your meetings have been among the bright spots in my life, always pleasant, always instructive.

And now at this, our fifty-eighth annual meeting, it is both a pleasure and a duty to be afforded the opportunity of expressing to many of you the renewed greetings of another annual meeting of the Aesculapian Medical Society, and to welcome others to the fold, who are with us for the first time, but who we trust will be from this time on active and honored members of this Society.

To these, I may, I think, venture with propriety to extend, along with a hearty welcome, our congratulations upon your assumption of intimate relations with us. Your future career is ours, and your standing as physicians will, in the years to come, determine whether the high standing hitherto maintained by this Society is to continue.

While "it is not the calling that makes the man, but the faithfulness with which one performs the duties and fulfills the responsibilities that pertain to the position he occupies," it is my belief "that medical study and

practice meet the highest purpose of earthly existence."

With the completion of this very agreeable function of welcome and congratulation, there comes the more difficult task of the delivery of an address on some subject of interest to us as physicians.

In doing this, you will I am sure excuse me if, as Dr. G. Frank Lydston says, I take occasion to "air some heresies of my own."

After thirty years of practice, and at that period of middle age when the enthusiastic optimism of youth is modified and toned down by more or less of the pessimism that naturally follows, it has seemed to me that a careful, though brief survey of the present status of the medical profession, and more especially of that part of the profession most largely represented in this Society, usually known as "the general practitioner," might be not only interesting but profitable.

That the "doctor" of today has not the exalted position in his neighborhood that was held by his prototype of thirty or forty years ago, will be admitted, I think, by all of you who know of his position at that time. That the average doctor of today is vastly superior in many respects to his predecessors of the times mentioned, is equally true. His technical education is far beyond anything ever dreamed of by the older practitioner: he has had all the advantages of high school and often of a collegiate education, a privilege enjoyed by but few of the older members of the profession. Instead of a few months of training in the office of a preceptor, and a two years course in a medical school having few facilities for his instruction, he is now the finished product of an institution where all facilities exist for his instruction in

chemistry, biology, microscopy and bacteriology. In addition to the gross anatomy of thirty years ago, he is taught histology as well, while all the problems of physiology are demonstrated by means of laboratory and experimental work that leaves no excuse for ignorance of the mysteries of the construction and workings of the human body. Pathology is if possible yet more thoroughly taught in the examinations of morbid specimens—while by actual clinical work in internal medicine, surgery, and obstetrics, he is fitted better than ever before to meet face to face, and successfully cope with the problems of his time as a practitioner of medicine and surgery, and as the guardian of the health of his community.

Other things being equal then, the physician of today ought to hold a larger share of influence in his community than ever before. But other things are not equal—the people with whom he is associated are changed also. The doctor is not now the only educated man in the neighborhood—the laity are educated too, and they no longer look to the doctor as the wise man of the town. He is the physician still to be sure, to be consulted in sickness and suffering, but often not otherwise.

The advent of specialism has also made wonderful changes in the welfare and standing of the general practitioner, and very often he spends his time and skill in diagnosing a difficult case, and explaining in minute detail the simplicity and want of danger of the operation needed, only to find next day that his patient has hied away to some specialist who does the operation with great gusto, surrounded by a bevy of trained nurses and admiring students, pockets a large fee, and perhaps at the same time makes a few disparaging remarks in regard to the mistakes of the country practitioner in general, and this one in particular; while the deserving practitioner at home, who could have done the operation equally well and for half the fee, is not even thanked; and if the patient survives the operation and gets home he never tires of telling to admiring crowds of his friends on the streets and elsewhere, what a wonderfully skillful man

the celebrated Dr. Blank is, and what he has done for him.

The worst thing a general practitioner ever does for himself is when for the first time he sends a patient away for an operation, and the worst enemy any of us ever had has not done us the harm that is done by some fellow practitioner, who not caring to do surgery or accept the responsibility of caring for some difficult case, gets the people of your neighborhood endued with the fad of going away from home to consult a specialist. There are specialists now for everything, and once get the fashion started, and there will be little left for you to do. With the facilities which are now within our reach for doing post-graduate work, which above all gives confidence to the man remote from medical centers, there is little or no excuse for rail-roading your patients away, thereby losing not only the fees which are justly yours, but at the same time your own self respect and the confidence of the community in which you reside. I believe the general practitioner to be the highest type represented in the medical profession, but it is the general practitioner who qualifies himself to do things and who does them, and not the one who in all but the most ordinary cases is merely the solicitor for the specialist, even if he gets a division of the fee. There are few, if any, legitimate operations in surgery or obstetrics that have not been successfully done by men remote from medical centers—forced to make the attempt often by the very fact of their isolation, and surprised at the ease and success which crowned their efforts. Such men are surely the peers of their more favored brethren in the large centers. I would not for a moment, however, have you think that every tyro ought to attempt things beyond his capabilities, and sacrifice valuable lives to his ignorance and unfitness. My plea is to increase knowledge and skill and acquire the confidence that is born of these, and then, and then only do things yourselves instead of calling on some one no better qualified.

If obstetrics were better practiced, and the doctrines recently promulgated by Barton Cooke Hirst of the University of Pennsyl-

vanias, and others, were more strictly followed, three-fourths of the operative work now being done by gynecologists would be unnecessary, and the general practitioner by his increased work and fees in thus doing would be greatly benefitted. Look after the lacerations of both anterior and posterior vaginal walls, perineum and cervix, at or soon after the time the mischief is done and repair them. Treat your patients before, during and after labor, so that there will be fewer pendulous bellies—so-called enteroptosis, with floating kidneys and all the psychic and other symptoms sure to follow, and you will be doing a greater work than has ever been dreamed of in your philosophy.

As to the results of medical legislation on our status as a profession, I fail to see appreciable benefits. In some respects, it seems to me we are worse off than before. Formerly we stood before the public on our own individual merits, now in the eyes of the law we are all on an equal footing—regular and irregular, osteopath and all, are permitted to practice by licensing bodies in the various States, while the most favored are the faith healers, Christian scientists and all the various classes of nefarious charlatans of that ilk, who are permitted to gull the public without let or hindrance. Quackery of all kinds never was in a more flourishing condition in Illinois than it is today.

Last but not least perhaps of the many things affecting adversely the standing and success of the general practitioner is the competition both honorable and dishonorable, due to over production of doctors by our medical schools. This state of affairs has necessarily brought about a condition rendering the life of the physician a very strenuous one and has induced a spirit of commercialism calculated to lower both professional dignity and popular esteem. This overcrowding of the profession is probably also to a great degree responsible for many of the little mean-nesses of professional men who in their struggle for supremacy, often for a mere existence, resort to measures despicable in the extreme, yet so masked by apparent rectitude that they are not amenable to correction and much deserved punishment. Of

downright quackery there is and always will be more than enough, but this variety is open and above board, easily recognized, and may be radically treated. Worse by far than these is the variety that sometimes, I regret to say, exists among those who pretend to be respectable—they are often in fact among the "holier than thou" representatives of the noblest of professions and are the barnacles that do most harm because of the very fact of their external Godliness. Their work is done always by insinuation, never by accusation or affirmation. We have also the Babbingtons of the profession and we know the type he stands for—plausible, smooth of speech and manner, always ready with a fund of well rounded platitudes, that are expected to be profoundly impressive to his hearers. He is essentially the modern type of high class charlatans, ready to lower any standard, sacrifice any tradition, welcome any innovation that means pecuniary gain to himself or enhances in any way the glory of Babbington. He is apt to be a member of many medical societies and is very constant in his attendance. He is usually a member of a popular church—a thing, per se, to be commended, and is fond of hobnobbing with the clergy, doing their practice for the free advertising they give him. As a staunch friend of churches, and a believer in Christianity, it is my opinion that there is no corner of perdition too bad for the man who will drag his religion through the slime and mire of a struggle for advantage in his attempt to gain medical practice.

Notwithstanding all these things, which are to be deprecated, but also may in time be cured, we are still young enough and optimistic enough to believe that the profession as it stands today, and the general practitioner as the broad minded, most self reliant, and all around best educated and most useful part of the great whole, is on a higher plane than ever before, and its members are the peers of any of the learned professions. The member of the medical profession, even if he has been known only as a general practitioner, who has acted well his part for the time allotted him will in his declining years become like "Prospero" the portrait of a

Christian philosopher, loving all things, and looking on time itself as a dream, and eternity as the only waking reality;—when

“The cloud capped towers, the gorgeous palaces,

The solemn temples, the great globe itself,
Yea, all which it inherit, shall dissolve,

And like the baseless fabric of a vision
Leave not a wrack behind. We are such stuff

As dreams are made on, and our little life
Is rounded with a sleep.”

“A man should die as he is born, unconsciously; hope is his birthright, and he should live in its sunshine until the great change comes.”

And when our lives are rounded out with this little sleep, I know no better epitaph than if it can be truly said of each of us; “He was a general practitioner, and he did his duty.”

APPENDICITIS FROM THE STAND- POINT OF THE GENERAL PRACTITIONER.

H. N. RAFFERTY, M. D., ROBINSON.

The subject of the proper management of appendicitis has been so thoroughly discussed and written upon, that at first thought one would say there is nothing more to add—that the last word has been spoken: and yet if I ask you gentlemen, if when you come in actual bedside contact with any one of the many types of this protean affection, you can at once conscientiously determine on a proper plan of treatment, one and all, you most emphatically answer no.

In the language of a recent writer, “the vermiform has been cut off, tucked-in and turned inside out; the patients have been purged, narcotized, packed in ice or baked in poultices; they have been starved or instructed to walk on all fours like quadrupeds; leucocytes have been gazed on through the barrel of the microscope, and the urine examined for indican, acetone or albumin, and yet, with all this study, all of the examinations, a fatal appendicitis caused by a little 8x1 cm. organ, has doomed thousands of

suffering humanity to an early and untimely end.”

It is plain that the reason for this unsettled condition of affairs lies in the fact that we cannot make a satisfactory diagnosis of the actual pathological conditions present in and around the appendix.

That the symptoms and physical signs bear no certain relation to the pathologic changes, we must all admit—most of us having unwittingly added to the “silent cities of the dead,” through placing implicit trust in pulse, temperature, pain, tenderness, or muscular rigidity, taken either singly or altogether.

What then is the remedy, and how applied? Great indeed would be the egotism of him who would proclaim himself the solver of this puzzle, and especially if he be one of my limited experience and ability; and yet I am only following in the footsteps of many of the ablest men of the day, in saying that I earnestly believe every case of appendicitis should be operated in the first few hours of the attack, or as soon as the diagnosis is established. Operation after the second day is attended by a high mortality, and, except in cases of abscess formation, the patient's chances for recovery from the primary attack are usually better if treated expectantly. Appendectomy during the interval is however the operation of choice, which should be attended by practically no mortality, under proper circumstances.

The writer has been much interested in the article on appendicitis in a recent edition of an English text-book on Surgery, by Rose and Carless, who, in common with the mass of English writers, take a rather conservative view of the treatment of this condition, *not* operating in the catarrhal cases, delaying operation for *two* days in the severe inflammatory ones, and advising operation after a *second* attack in the recurring or relapsing cases. And then they very calmly proceed to knock their whole argument to pieces, by declaring in their own words “that the prognosis is never certain, that the initial symptoms are frequently alike in all varieties, and hence one can never know what course the case is going to take.”

They then quote an American, Robt. T.

Morris (and just here allow me to say that the whole world is beginning to throw bouquets at American surgery), who says that "the infected appendix is a cap which sometimes snaps, sometimes flashes, and sometimes causes an explosion, and none of us can tell in advance just what is going to happen."

At the last annual meeting of this Society, you will remember that Dr. Fernald read a very able paper on this subject, which elicited quite a spirited discussion. At that time I was impressed with the idea that the author was on the wrong side of the fence, so to speak, and since that time I have met with a series of cases which has served to strengthen that idea very materially. If this be a "delusion," then it is most assuredly a "fixed delusion." I can explain this difference only on the ground that Dr. Fernald has met with one class of cases, and I with another.

These cases were four in number, two of them in my own practice, and two seen in the consultation practice of Dr. T. N. Rafferty and myself.

Case No. 1. Ethel He. I was called four miles in the country, at about 10 p. m. Dec. 19, to see a little girl ten years of age, who had come home from school on the afternoon before, complaining of pain in her side. The parents had not thought her seriously sick until the next evening, when the pain became much worse, and they decided to have medical aid.

I found this little girl with a temperature of 102°, pulse of 100, severe pain in the abdomen, radiating from the right side, tenderness over the region of the appendix, and marked muscular rigidity. She lay in bed, with the right leg flexed at hip and knee, and altogether made a typical picture of a fairly severe case of appendicitis. I explained to the father that an operation might be necessary, quieted the patient with morphine hypodermatically, and arranged to see her in the morning.

When I returned that Sunday morning, I was startled at the change which had taken place in this girl. She had not rested much during the night, her temperature had

dropped to near normal, pulse was 120, the whole abdomen was becoming rigid and tender, though the pain had about ceased. Her abdomen was tympanitic, breathing rapid and shallow, and facies bad. It was plain that she was developing a general peritonitis. This little girl had now been sick 36 hours, and it seemed to me that she was going to die, whether operated or not. I saw her again a few hours later, with consultation, and we decided nothing could be gained by operating. The downward course in this case was very rapid, as death occurred the next afternoon, within 72 hours from the time she came home from school, "with a pain in her stomach," and within 40 hours from the time I first saw her. There was no history of a previous attack, nor of any severe sickness. An autopsy was not allowed, but from a careful study of the case, and especially considering the cessation of pain at the time the peritonitis began to be general, I believe this to have been a case of gangrenous appendicitis, in which appendectomy within the first 24 hours would have saved the patient's life. I believe I am justified in holding this opinion from the findings and results in case No. 2, which I am about to relate.

Case No. 2. G. B. This was a case seen by Dr. T. N. Rafferty and myself, in consultation with Drs. R. L. Gordon and G. W. Fuller, of Palestine, Ill., May 7th. This young man was 24 years of age, and had been sick 30 hours. His temperature was 99 $\frac{3}{5}$, pulse 86, and the pain, which had been considerable during the night, had about ceased. He was sitting propped up in a chair, with the right leg extremely flexed. There was marked tenderness over the right iliac fossa, with rigidity of muscles.

We hesitated about operating on a man with practically a normal temperature and pulse, and no pain; and yet we finally decided to operate—the two things which influenced us most being the bad facial expression, and the sudden cessation of pain. The appendix was quickly removed, after the separation of some recent adhesions, and found to be gangrenous at the distal end, with that thickening and softening of the

entire organ, which precedes total gangrene. The peritoneal covering of the bowel was violently inflamed for a distance of six or eight inches, and on this account we were doubtful of the outcome. However the patient's convalescence was without incident, save for a difficulty in getting the first bowel movement, and he is now in the best of health.

Case No. 3. Ethel Ho. 8 years of age. The father came to our office on the afternoon of July 1st., saying that the little girl had been crying all day with a pain in her bowels, and that I had better either send her medicine or go and see her. I told him it would be best to see her, and went at once.

This was a case in which the diagnosis could almost be made from a glance at the little patient, as she lay in bed, with both legs drawn up, her respirations short and rapid, the whining cry of pain, the characteristic hippocratic countenance, and the perfect consciousness. Upon examination, her temperature was $101\frac{1}{2}$ °, pulse 132, the whole abdomen tender and showing muscular rigidity. She placed her finger just over McBurney's point to indicate to me where the pain began, and where the greatest tenderness was. She had accompanied her mother to town on the afternoon before, and had complained of feeling bad during the trip home. There was a history of an attack of fever, and pain in the abdomen two years before, at which time no diagnosis was made, the patient recovering in two or three days.

Since that time she had been apparently well, except occasionally had complained of pain in her abdomen.

I told the parents that it would be folly to operate on her, and that her chance of recovery, though slender, would be better if treated expectantly. I saw her twice the next day, and was with her on the day following when she died, at 10 a. m. Drs. T. N. Rafferty and A. G. Meserve, both of Robinson, consulted with me in this case, the latter however after the patient was moribund. The course of this case was somewhat more rapid than case No. 1, as the patient lived only 60 hours from the onset

of the attack, and 40 hours from the time of my first visit.

Again an autopsy was not obtained, but I believe this little girl had a mild attack of appendicitis two years before, which was followed by a latent inflammatory condition, with the occasional attacks of pain, and that at the beginning of this attack, there was a perforation of the appendix, with the escape of pus—at least enough in quantity, and of sufficient virulence in quality, to excite the most rapid and hopeless case of general peritonitis I trust it will ever be my lot to see.

Might there not have been a different ending to this case, Dr. Fernald, and Gentlemen, if the appendix had been removed after this first attack, granting that a diagnosis were possible at that time?

Case No. 4. G. P. 24 years of age, occurring in the practice of Dr. L. R. Illyes, of Heathsville, Ill., was seen by Dr. T. N. Rafferty and myself on the fifth day of the attack. He showed pronounced septic symptoms, with irregular fever, vomiting, etc. There was some swelling in the right iliac fossa, though not as much as two days before, and no fluctuation, or oedema of the skin.

Dr. Illyes thought him better in most respects, but the persistent vomiting decided us to operate. I made the incision below and posterior to McBurney's point, and in searching for the appendix with my index finger, ruptured an abscess cavity behind the caecum, lying in the hollow of the iliac bone. The appendix had sloughed out, leaving a perforation which admitted the tip of the index finger. The cavity was not completely walled off on the anterior side, which deficiency was supplied by gauze.

This patient happily recovered, and with the exception of a fecal fistula, was in good condition in three weeks. The fistula closed spontaneously in nine weeks.

To recapitulate, I have given you the histories of four cases, viz: (1) a case of gangrenous appendicitis, not operated on, and followed by death; (2) a case of gangrenous appendicitis, operated on within 30 hours of the onset followed by recovery; (3) a case of latent inflammation following a

primary attack (not operated), in which there was a sudden perforation of the appendix, with general peritonitis and death, and (4) a case of appendicitis, with abscess formation and sloughing of the diseased organ, operated on the fifth day, with recovery.

Naturally you will form your own individual conclusions, but to me they are self-evident. Do not understand me as claiming to have settled this broad question, by the study of four cases, for I am only giving you the meagre experience of a year's general practice—contributing the widow's mite, as it were, to the generous collection of statistics and deductions therefrom with which we are already nearly overwhelmed.

As to the actual and practical solution of the questions involved, I am afraid that is a *Will-o'-the-wisp* with which we will never come up; that when the touch of the physician shall have universally become the "*tactus eruditus*;" when the closed abdomen shall have become as an open book; when medicine has truly become a science—in fact when that much-talked-of, but never-to-be-expected, medical millenium has arrived—then, and not till then, will the subject of appendicitis cease to be of interest to our most progressive of professions.

THE PRESENT EPIDEMIC OF SMALL-POX IN TERRE HAUTE.

BY M. R. COMBS, M. D., TERRE HAUTE, IND.

Unfortunate indeed is a community about to be visited by an epidemic of smallpox, that it should have the introduction by way of a series of mild cases. Terre Haute for four years has had her citizens become so accustomed to the presence of smallpox in a mild way that upon the appearance this year of a peculiarly virulent form of the disease, they were almost ready to embrace it. Not until the pestilence had spread over a considerable area of the city, and not until deaths from the disease became almost daily, did they awake to a full realization of the catastrophe upon them.

The present epidemic has done one thing if no other and that is to settle the question

of diagnosis. The Cuban itch doctors have not been so persistently in evidence as on former occasions, and the man who would "rather have the smallpox than have his arm taken off" has shown a remarkable agility in dodging it when appearing in his neighborhood.

In a few days our city changed from a condition of lethargy to one of excitement, and citizens meetings were held with a view to lending proper assistance to the Board of Health in their efforts to stamp out the disease. Then and not until then was the Board able to make any impression on its progress. Business men are prone to look on the disease only as to the effect it may have on their business. They are frequently slow to realize that the disease must be attacked and put out and that it will not stop with the denying of its existence. The Health officer who tells the truth, under these circumstances, is quite apt to be abused for his honesty. As stated before, the question of diagnosis in this epidemic has been a comparatively easy one and yet there will always be atypical cases in every epidemic that will try the diagnostic acumen of even the expert. We have unfortunately on more than one occasion been compelled to exchange a measles or scarlet fever card for the flag of the smallpox and I have a faint suspicion that perhaps the gaudy red flag has undulated in the breeze for thirty days where it would require a considerable stretch of the imagination to have demonstrated a pustule.

The smallpox physician has been instructed to be in no haste in making a diagnosis, simply establishing quarantine and keeping the case under surveillance until reasonably sure, but when once diagnosed as smallpox to stand pat on the proposition though the Heavens fall. Likewise where reported definitely as such by the attending physician the diagnosis shall be accepted and the case treated as smallpox, whatever the future developments might be. The thought has been that it were better for the community that a few families be quarantined when the cases were doubtful than that one should escape to spread the contagion.

To form a correct diagnosis of smallpox

in these atypical cases it is necessary that one shall have had a considerable experience and have seen a large number of cases. The first appearance of ordinary cases of variola are not unlike the measles eruption and the general uniform red rash usually appearing first in the hemorrhagic variety may be very easily mistaken for scarlet fever. The presence of the disease in a community should always place one on guard and keep him alert as to the probability of any train of symptoms or no symptoms at all being followed by a smallpox eruption. The prodromal symptoms of a chill followed by a quickly rising temperature, often running to 104 and 105, with headache and backache, delirium, vertigo, general malaise, anorexia, a thickly coated tongue, nausea and vomiting, when present, are guide posts that point plainly to smallpox. Unfortunately, they are not always present, or if present not sufficiently accentuated to make the case unmistakable. We should remember that smallpox is found in the mucous membranes and very often before the eruption is noticeable on the cutaneous surface the mucous membranes will tell the tale, and particularly should we look for evidence of a beginning conjunctivitis. The eyes are usually swollen and painful and light is intolerable. If in doubt as to whether a given case may be typhoid look in the mouth and if smallpox you will find red nodules on the velum palatae and on the buccal mucous membrane. Within three days usually the eruptive stage begins and it is to be remembered that it begins on the face; that it is papular; that these papules convey the sensation of shot under the skin to the fingers. That this exanthema progresses from the scalp to the soles of the feet; that the general tendency of the eruption is to appear more pronounced on exposed surfaces. The appearance of the eruption within the mouth, on the eyes, on the palms of the hands and the soles of the feet are certainly corroborative symptoms that will assist in the diagnosis. The case should be settled before the appearance of the pustules but should there remain, owing to the mildness of the attack, an element of doubt, we have only to search for the double

areola surrounding each pustule. We will always find, no matter how slight the inflammation, two distinct inflammatory areolae around each smallpox pustule, and so far as I know this is not true of the exanthema of any other disease. The most intrusive symptom in our cases this year has been the odor. They have smelled to high heaven with a smell that has resisted all known detergents and disinfectants.

Our present epidemic owes its origin to one Clarence DeBaun, an unvaccinated person, who, after sojourning for a time in St. Louis, returned with a fairly developed case of smallpox. Through a failure to recognize the disease by the attending physician the case was not reported until perhaps fifty persons had been exposed. Within the next twenty days a number of cases developed which could be clearly and unmistakably traced to that exposure. Every case in the city at the present time can be traced back to the DeBaun case, with the exception of those who have come from other places with the disease. Since the 25th of July, the date of the report of the DeBaun case to the present time there have been 151 cases, with 18 deaths, a mortality of over 12%. More than 80% of the cases have been serious. At least two have been rendered blind. One person, by the development of bed sores and cystitis has become practically bed-ridden with a convalescence that will extend over several months.

A disease with such direful results can well claim our most serious attention. Vaccination, quarantine and fumigation necessarily were our only weapons of defense. Quarantine in a small community or in the presence of a few cases may, by extraordinary vigilance prove effective, but where the cases are numerous and where new cases are developing rapidly, in a city with its numerous interests and its numberless chances for extension, it is the most expensive and least effective method imaginable. A chain is no stronger than its weakest link and so a quarantine which does not include every person exposed is absolutely futile. We have found this to be impossible, as numerous chances for exposure have been

overlooked in spite of extraordinary vigilance. The people have demanded quarantine and we have given it to them at the expenditure of large sums of money, for which the Board has seen no adequate return in the way of the amelioration of the conditions existing. A peculiar phase of human character is developed on the enforcement of quarantine, in that each person is anxious to see his neighbor quarantined but can advance many arguments why he should not be included and can resort to very many ingenious expedients to escape it. Fumigation and disinfection has undoubtedly been a valuable means of defense and yet this harmless and necessary procedure has been met with opposition. It would seem that aside from any scientific knowledge of the subject that plain ordinary horse sense would dictate such a plan of action, and yet we have what would be an amusing, were it not so vitally important, spectacle of a learned judge on the bench deciding that the Board had no right to fumigate a man exposed to smallpox unless some two or three hundred other people, who may have possibly been exposed, should be fumigated in "an even and uniform manner." In other words the judge has said that if a man objects to fumigation before we can force him to submit we must fumigate everybody else and come to him last.

After experimenting with numerous formaldehyde generators and other apparatus used for disinfection, the Board has finally settled on the ordinary florists spray, using a 40% formaldehyde solution and following with a Lister Formaldehyde candle for each room. This method has seemed to meet every indication with a minimum expense, both for time and material.

The further I have investigated and the more experience I have had, the more firmly am I impressed with the fact that vaccination is the one and only way to successfully fight smallpox. This is said with no desire to Deify vaccination or claim for it more than can be reasonably and fairly proven. Let us not in our enthusiasm claim for it more than is justly due. It is not an absolute and infallible preventative. There are cases

perhaps where undesired results accrue from vaccination. Granting this to be true, the combined opinion of the scientific world and the combined experience of those who have fairly investigated the question is that in the great majority of cases it either absolutely prevents or at least modifies the disease. To be effective there should be vaccination and revaccination. There is no arbitrary time limit at which vaccination ceases to protect. It may protect for seven years or seventy years, or, only seven weeks. The only test is repeated vaccination. The Board of Health for the present epidemic has adopted two years as the time limit, simply because some arbitrary standard *must* be fixed to secure uniformity, and with the thought that this limit would catch those most likely to need protection. Careful inquiry in the cases at Terre Haute this fall has shown that every death from smallpox and every severe case has been in the unvaccinated. Not one single, solitary case so far in the epidemic, either mild or severe, has shown a successful vaccination within the last two years. Every mild case has shown a vaccination 10, 15 or 20 years previous, or at about the time of infection.

With these facts clear and indisputable why should Terre Haute or any other city spend thousands of dollars for quarantine when every one can carry his own quarantine with him for fifty cents. Why should there be this paralysis of business, this curtailment of amusements and social life, when everyone can so easily place himself outside the smallpox zone. Terre Haute is spending \$5,000.00 per month fighting smallpox, made possible by a little coterie of anti-vaccinationists, whose pestiferous noise bears an inverse ratio to the taxes they pay. In spite of the opposition of these cranks, we were able by persuasion, by fear and by the judicious use of the quarantine law to inaugurate a season of vaccination in Terre Haute such as has never been known before. The employees of labor were given distinctly to understand that unless they made vaccination a necessary requisite for a continuance in their employ that the first case of smallpox developing among their employees would

be the signal for quarantine being established over their place of business. Most of them were in hearty accord with our work and cheerfully co-operated with us. Some were merely careless and some opposed it. An overall factory, whose proprietors were careless, was the first to come under the ban. The closing of their establishment and the placing of flags on their building brought them up with a jerk. A wholesale grocery next came, and when it was seen that the Board meant business no further trouble was experienced along this line. A careful estimate prompts us to say that we were able in two weeks to secure the vaccination of 25,000 people in Terre Haute. The result was surprising and gratifying. In a comparatively short time the new cases of smallpox reported daily dropped from ten to three and four. I am pleased to report that at this time we have in Terre Haute only 28 cases of smallpox and that unless conditions change radically we can safely assert that the epidemic is under control. This statement, however, is tempered by the knowledge that there are perhaps 15,000 unvaccinated people in our city and vicinity who, by their carelessness or wilfulness, are inviting the disease to come and abide with us.

The Supreme Court of New York has recently upheld the compulsory vaccination law. I am not familiar with the conditions in Illinois. In Indiana we need legislation along this line. As a medical profession, we should stand as one man and insist, nay *demand* that we be given the proper authority to meet these emergencies as they should be met. Until we are granted these rights the municipalities of our State must suffer in money, in the lives of their citizens, in the loss of business prestige and in the loss of civic health for their legislative short comings.

PREVENTIVE MEDICINE.

C. BARLOW, M. D., ROBINSON.

It is to be presumed that primitive man existed under the most favorable conditions

and at a time when the world was new and when pathogenic microbes did not exist, and when according to the biblical account men lived for hundreds of years. The necessity of a cemetery was caused by the violent removal of a fellow citizen; and according to the account of this tragic occurrence it was a long time, centuries perhaps, before there was an occasion for another funeral. According to the only account we have of those early days the average life of man must have been some hundreds of years. Disease germs and such conditions as were necessary to produce sickness had probably not yet been created; and the antediluvians were so full of health and vigor and knew so little of disease and death that it is not a matter of surprise that they became so obstreperous that their creator decided to remove them from the face of the earth. It seems from the same account that the longevity of the post deluvians was gradually reduced until man's days were limited to about three score and ten years; and the evolution of disease germs and coincidentally of disease itself became such a factor in the life of man that it had to be reckoned with. About this time in the history of our race the evolution of a great profession had its beginning. In the first period of medical development, remedies for the cure of disease were sought; for there was sickness abroad in the land and something must be done, so remedies were resorted to and apparently with some success, for many who were stricken recovered as they do now, and the remedies used were given credit for the recovery just as they are at the present time but the results were not satisfactory. During this stage of the evolution of our profession the idea of preventing disease took possession of the mind of some of the sages and in the absence of scientific knowledge the advance thought of the day took the form of sacerdotalism regarding both medicine and hygiene and both gods and goddesses were created and were regarded as the super-natural heads of these two great divisions of the medical profession. To the goddesses were given the power to prevent sickness and preserve health, and as in the case of Panacea, to sometimes act as

a specific for all forms of disease. But it was to Hygeia that the credit was given for being able to prevent sickness. This was probably because the woman was regarded as a type of purity and was thus given this wonderful power over disease. The idea that sickness was in some way associated with filth and impurities of one kind or another became dominant and woman as the typical representative of that thought was made the goddess of health and in this creation the world has been benefitted more than it knows; and a most important step was taken when Hygeia, the ideal of purity, became the goddess of health. After many generations this ideal was exemplified in the discovery of bacteria as the chief cause of disease; and the biology of disease germs as the guiding star in the management of disease. Thus far the advancements were nearly all made in the dark; but we are now in the early morning of an exceedingly bright and glorious day. The flood of light coming so suddenly upon this wonderful field of medicine has so perfectly illuminated it that the advance in scientific progress will surprise the world and those of us who have lived to see our profession merge from darkness into the most brilliant light, are indeed fortunate and happy in the thought that we shall see our profession purify the world and bring about conditions that will compare favorably with the earliest period of man's existence and when contagious and infectious diseases will be but little more than matters of history. We know the cause of disease and we know that in sickness if we destroy all germs and let none escape that the disease can go no farther. This is easily done by strict attention to details, and there is no reason why we should not control contagion and infection in nearly all cases. Preventive medicine has had many triumphs some of which were made in the dark ages. It is said that in Geneva in the sixteenth century that the mean duration of the life of man was only about eight or nine years. This I believe is the lowest record given and with the limited information possessed at the time the average duration of life was raised in the same locality to about forty or forty-five

years by the close of the nineteenth century. Such a record as this is very encouraging and we who live in the dawn of the twentieth century may confidently expect greater results. The introduction of vaccination by Edward Jenner in 1798 has given us an object lesson from which we will profit more than the most hopeful can imagine. Vaccination was easily the greatest triumph of preventive medicine until the development of bacteriology, which has in a measure given us the key to future investigations. The triumphant advent of antitoxin is the outgrowth of the idea of vaccination associated with a knowledge of bacteriology. It is in a degree an association of ideas and I have thought that if tuberculin were made from tubercle bacilli obtained from the cow that it would be more efficient and less dangerous. The two great thoughts connected with the subject of preventive medicine are immunity and specific treatment, but a greater still is eradication of disease germs. An immunity against disease may be produced as in vaccination as a preventive of smallpox, specific treatment may be given as, antitoxin in diphtheria, or we may eradicate or exterminate the disease as I believe will be done in the case of tuberculosis by the destruction of the germs. To accomplish the latter a united effort of the profession and the laity must be made and it must be continuous until the last bacillus is destroyed. To do this a crusade must be inaugurated against consumption, and the first step must be in the way of education. This educational campaign must reach every physician in the land and it must then extend to the laity. There is an urgent necessity for action all along the line for consumption is abroad in the land and in many localities it is on the increase. We have the statistics of our state board of health as authority for the fact that seven thousand of our fellow citizens in the State of Illinois gave up their lives as victims of this terrible disease last year. Shall we allow the onslaught to be repeated? No! it must not be. Consumption is a preventable disease and it can also be cured. But to accomplish either, physicians must wake up, lay aside some of their false

modesty, release their hold upon an antiquated code and instruct the laity through regular professional channels if possible and the secular press if it must be. This can be done by the authority of the organized profession both in a local and a general way. This will give it the authority of the profession without any simulation of questionable methods. The state board of health are the ex-officio leaders of this move and this board alone can furnish the requisite information and it can also make the authoritative appeal to both physicians and the lay members of society. By the authority of the profession tent colonics should be established throughout the State. One in each county under the supervision of the county society for the purpose of demonstrating the potency of the fresh air treatment of tuberculosis. It is a strange fact for which the profession is in a measure responsible, that consumptives in many instances will not live in open houses because of a morbid fear of taking cold. Some years ago I was called to see a middle aged man who was suffering from the effects of incipient phthisis, a liberal diet and an out door life were prescribed, and open house at night. The next visit he was sleeping with the house closed and he scarcely ventured out in daytime and as a reason he said it would kill him if he should go out and take cold. The next visit he had fastened himself in the house in a temperature of more than one hundred degrees and had all the cracks and key holes stopped with rags, and before I saw him again he died, a victim of a morbid fear which an object lesson in the way of a tent colony would have removed, and he would have recovered. The Illinois State Medical Society did some good work along this line, in presenting a symposium on tuberculosis and by its authority and assistance to Dr. Pettit in the establishment of a tent colony for tuberculous patients. There is no longer a question regarding this plan of treatment and an extension of it throughout the State would result in saving more lives than would any other method known to the profession at the present time. This of course is for the management of those who already have the disease, but it would also

act as an efficient preventive by teaching the necessity for the destruction of all tubercle bacilli that might exist in the sputum and in all the discharges from the patient. Everything used in feeding these patients, knives, forks and cups, and even the hands should be disinfected. "No spit no consumption" is a good maxim; but it hardly covers the ground in all cases. Perfect sanitary surroundings should be the watchword—for cleanliness is next to godliness in this case and the more thorough the cleanliness the better for all concerned. In conclusion I wish to say that nearly all disease is caused by germs. These germs are living entities whose biological conditions are pretty well known, and when these germ diseases appear if we destroy all the germs so that none of them can come in contact with any individual the disease cannot spread. In other words—no germs no disease. Germ diseases are all preventable. Therefore they need not exist if we all do our duty. In the absence of infection and contagion with the consequent improved sanitary conditions the average life of man would be almost three score and ten years, and the extreme duration might be much more than a hundred years. And if the suggestion of death at seventy were thus removed, men might, by the aid of auto suggestion, acquire the longevity that existed when the world was new.

ATTENTION TO DETAILS.

BY C. E. PRICE, M. D., EATON.

There is a story told of a busy doctor, who boasted that he could feel his patient's pulse, look at his tongue, sound him with a stethoscope, write his prescription and pocket his fee, in a space of time varying from two to five minutes.

One day an army man was shown into the consulting room and underwent, what might be termed, the instantaneous process. When it was completed, the patient shook hands with the doctor and said, "I am especially glad to meet you, as I have often heard my father Col. F. speak of his old friend Dr. L."

"What," exclaimed the doctor, "are you Dick F's son?"

"I am, sir."

"My 'dear fellow,'" exclaimed the doctor, "fling that prescription into the fire, will you, please, and sit down and tell me what is the matter with you?"

There is another story told of an eminent Gynaecologist before whom a patient appeared one day—narrated her trials and her history and insisted that she had been under his care before. But no incident or condition that she could recall would convince him that he had ever seen her. But the moment that his bimanual touch was applied, the most minute details of her case came to him in striking outline, and he exclaimed—"if you had only shown me your pelvis at first instead of your face, I would have recognized you at once."

Attention to Details—one to the pocketing his fees—unless it be a special friend—the other, so all absorbed in the details of his case, that he forgot her, but not her Pathological condition even after the lapse of years.

He, who assumes the responsibility of caring for the sick, should always be mindful that *details* are what count. If the case appears ever so mild, a detailed examination might reveal a condition that would, in time, prove serious—the sin of omission is greater than the sin of commission.

There is nothing more damaging to a physician's reputation than a prognosis unfulfilled, not having recognized indications of danger. This, consequently, will raise false hopes. Yet there should always be a measure of hopefulness becoming in a physician's duties, which are potent, to inspire action and secure the highest efforts of all engaged in the care of the sick.

Medical history shows that the busy practitioner is the one to whom we are indebted for the great truths which have placed our profession in the position and power it holds. But they have paid *Attention to Details*.

It is he who sees disease in its destructive process—the expert pathologist—the dead products of disease.

Infectious diseases are by no means, all we have to study, and by the neglect of atten-

tion to those functional changes which are the first stage of organic disease, we forfeit our greatest worth. He, who best understands Nature's wants and can assist in removing the cause of disease, will have the greatest number of cures to his credit.

The physician or surgeon should be conservative not an extremist.

The surgeon, who has made a detailed examination and has a clear conception of the case in hand and has decided for the good of his patient, that it is not an operable case, has done as much good to humanity, as he would with the most delicate, daring and successful operation in another. It is as much to know when not to do a thing as it is to know when to do it.

We would be more successful in accomplishing a cure of mankind and his ailments, or at least, contributing to his physical well-being, if we make a true diagnosis, have a clear conception of the pathological condition of the patient in hand, establish a correct line of treatment, give directions as to time and mode of taking the medicine, attention to diet and hygienic surroundings.

We must also study closely the frailties, short-comings and susceptibilities of our cases. We, too often, take into consideration the diseased condition of our patient and leave out the individual. We must remember the important part, the mental condition plays in curing mankind of his ailments.

The impressions made upon the patient during an examination for some obscure disease, questions asked and manner of asking them, naming the disease and giving a prognosis, should be so guarded and accomplished with such tact as to not leave any suspicion of doubt as to the examiner's knowledge or interest in the case. Not only, is this necessary with the patient alone, but time and time again we have had a harder study in diagnosing and treating the family and friends of our patients.

Explicit and emphatic directions as to what the patient should or should not do; exact time of giving medicines, baths and nourishments. In some way, leave an impression upon the minds of patient and friends that you expect to do something for their

good. It is not wise to give a prescription and direction for taking it, in a careless, off-hand manner. If you have no faith in your drugs, and show it, by your very act, how do you expect your patient to have any in your employment of them?

Then who is to blame if they choose to worship false gods? It is further necessary that the most rational treatment consist in the judicious employment of medicines of a reliable strength and composition.

Attention to Details consists in knowing that you have your patient under control, mentally; knowing that he is taking his medicine as directed, and that it is acting as you had intended it should and whether the physiological effects were produced as desired; knowing that the baths were given as directed and accomplished what they were wont to do; whether the kidneys and bowels were doing their part; the diet given in such quantities and times and that it was digested and assimilated to such a degree as to sustain strength and vitality.

The hygienic condition should always be uppermost in your mind and see that it is as it should be.

These things should all be accomplished in a manner so simple and quiet as not to arouse any suspicion on the part of the patient as to his dangerous condition.

There is not a physician who has practiced medicine any time at all, but can recall incidents in which he has made mistakes and lost the battle by not paying more direct attention to details, and others in which he had won a victory from details, if not in the way of saving life, having the satisfaction of knowing what the trouble was.

There is no branch of our profession in which accuracy and thoroughness are as much needed and will do as much good as in preventative medicine.

The profession, at the present time, is making a great stride in the State of Illinois against "Tuberculosis," and it will only succeed by co-operation of every member of the profession in the State.

An early diagnosis, emphatic instructions as to their care and treatment, especially the part which pertains to the transmitting and

spread of the disease must be carried out regardless of their position or surroundings. Better yet, complete isolation.

In the acute contagious diseases—smallpox, diphtheria, scarlet fever, etc., the most strict and careful quarantine should be established, regardless of the seeming innocence of the epidemic.

The necessity of this has just recently been brought to my notice from an epidemic of scarlet-fever in which the people of the community have ignored all quarantine regulations.

It has been said that Mother Earth has been very kind to the physician and surgeon for she has covered many and many of their mistakes. We all make mistakes. We would have to be divine, if we did not.

But more attention to the little things of every day occurrence will rob Mother Earth of a part of this—her painful duty.

Physicians are to blame themselves, for a great deal of the abuse they receive from the laity. Lack of stability, nihilism and a greed for the filthy lucre has caused the people to look upon us suspiciously and be so easily deceived by the irregulars.

It is also the function of the physician to remember that he must do no harm in his endeavor to do good, and it is better for him to err on the side of ultra conservatism and let his patient have a chance to get well, than, in his anxiety to continually pour into his patient, remedies which may be of uncertain value, or which may seem to be indicated for their influence in one direction, when, in reality, their power for harm in another may make any influence which they may exercise for good, a very small part of the effect upon the patient.

Medicine, as it touches upon the interests of life and death should feel itself in alliance with higher motives than any which can be thought to help and quicken its pursuits as a mere science.

Medicine should have a sort of moral respect in the handling. It calls upon the conscience, as well as the intellect, for more caution to avoid error and more fearfulness of over-stepping the truth.

NEURASTHENIA.

 BY H. I. M'NIELL, M. D., NEWMAN.

This is a subject which has proved to be of unusual interest to me in the practice of medicine, while I infer from the statements of other physicians that it is a subject which is frequently to be considered by most of us. No other one disorder has occupied my attention so much since entering upon private practice as has this, so called American disease.

By neurasthenia is understood a functional disorder of the nervous system characterized by muscular weakness, lowered nerve energy, and spinal irritability: a condition of nerve exhaustion over which a patient has no more control than an exhausted athlete has control over his fatigued muscles.

The etiology of this disorder must remain subject to dispute as long as we know little or nothing of its pathology: some points however are fairly well established as to its causation.

1. First, the influence of heredity. In the majority of cases heredity will be found to play a very important role. In some cases a direct line of neurotic tendency can be traced in the ancestry of the patient, if not of neurasthenia itself, then of hysteria or of insanity, in either case indicating an instability of the nervous system at some point and hence a lowered resistance to the external influences producing nerve weakness. In other cases a direct neurotic history being lacking, we find a parentage weakened by organic disease or by drug addiction producing offspring not endowed with the physical characteristics necessary to meet the struggle of life: such are the children of those addicted to excesses in alcohol, to opium, etc.

2. Closely allied to hereditary influences are the developmental influences: In some cases we find that the nervous system has only partially reached the development recognized as normal and essential to a well balanced man: or again, there may be a lack of development of some other organ with a profound mental impression because of

the deformity. Still another and a very important developmental deficiency exists where children have not been trained in self control hence continually dissipate their nerve forces.

3. A third etiological factor is association. It will frequently be noticed that persons associated with neurasthenies become gradually and insensibly drawn into their ways and in time themselves become neurotic: In still another group of cases an association of circumstances may precipitate neurasthenia, viz., where great danger or acts of violence are repeatedly brought before the mind of the patient; for example, an exaggerated case was seen in a telegraph operator who frequently heard accident and death messages passing over the wires in his station. The particular determining cause in this case was a railroad accident in which the patient witnessed the death of another man from which time he referred the beginning of his nervousness.

4. The fourth class of etiological factors is mental and physical fatigue. Prolonged exertion along one line or effort for a short time but in excess of the physical endurance of the patient, predisposes to nerve weakness and to nerve disorders: The same result will often follow a prolonged, monotonous, or severe mental effort. Continuous study in preparation for some severe mental test, for example, preparation for Civil Service examinations, for student competitive examinations, for public exhibitions, etc., especially where there is a fear of failure, these are examples of mental fatigue apt to produce neurasthenia. Similarly we find that financial, social, and political excitement and reverses are a very important factor, it being common to see this disorder affecting Board of Trade speculators, brokers, politicians, and society women, the last named being influenced by late hours and by other forms of dissipation. Again mental fatigue may be produced by a guilty conscience or a sense of remorse because of some offense committed; a fear that some crime will become known; a persistent brooding over some event.

5. In the fifth place any of the forms of mental, physical, or moral dissipation may

become etiological factors in the development of neurasthenia: the strenuous life unrestricted, drug addictions, sexual excesses, unrestrained political and religious enthusiasm: any of these may be sufficient to overwhelm a nervous system when aided by other factors already mentioned.

6. Last, but by no means least important class of causative factors includes the acute and chronic diseases to which all men are subject: acute venereal diseases with their mental impressions, acute infections with toxins poisoning the nerve tissues. pulmonary, cardiac, or renal, diseases endangering life are potent factors, while chronic exhausting diseases, anaemias, diabetes, etc., with little hope for recovery are even more important influences.

In brief, any mental or physical strain acting upon a nervous system which has a congenital or an acquired deficiency, may produce neurasthenia.

SYMPTOMS.

The symptoms of neurasthenia have been classified by Chareot and others of the French writers into the stigmata, or essential symptoms and the accidental, or secondary symptoms. Among the stigmata are named:

1. First, headache or head pressure taking the form of a weight on the vertex, a sense of constriction about the head, or an intracranial pain of variable intensity.

2. Second, insomnia, which symptom is complained of in a large percent of the cases. The patient retires completely exhausted but tosses about in his bed for hours before being able to obtain sleep, or he may fall asleep immediately after going to bed but awakens in a few hours and remains awake during the middle of the night. However the statements of these patients in regard to the amount of sleep obtained must be considered with some reserve, in as much as the wakefulness is apt to be over rated.

3. Muscular weakness, the neurasthenic tires easily, his ordinary duties cannot be accomplished without unusual effort, while acts requiring great effort cannot be performed at all: moreover he continually feels weary, and finally is compelled to give up this or that occupation however unwilling to do so.

4th. Lowered nervous energy, not only are the muscles weak but the ambition and the will are distorted so that nerve energy is not expended in the right direction.

5th. Spinal irritability, which is manifest in pain or tenderness along the spine, in hyperaesthesia of the skin, in exaggerated reflex activity, and in sensitiveness to external stimuli.

6th. Nervous dyspepsia, often one of the first discomforts complained of by the patient. He has a poor appetite, this or that food does not agree with him, he has distress after eating, belches gas, some times even will vomit the food ingested.

Among the symptoms regarded as secondary we may consider briefly:

1st. Disturbance of cerebral activity; these patients complain that they are forgetful, they are uncertain of having done this or that act, they will read the same page of a book several times without retaining the meaning set forth. Together with forgetfulness is an inability to concentrate attention on their work, a confusion of ideas, an anxiety that they will not be able to accomplish some task, and finally a fear that they will become insane.

Again there is an exaggerated impressionability, they magnify facts, they are susceptible to suggestion; a point of importance when considering the treatment.

The neurasthenic is often dominated by imperative ideas of various kinds, one will wash his hands a dozen times a day being haunted by a vision of dirt, another will repeatedly brush his coat, a third will fear some impending danger, while still another looks at the locks on the doors several times before retiring for the night.

Closely allied to the above is a tendency to introspection, the patient spends much time in considering his own faults and troubles, he cannot put self away, but studies and examines every sign and every symptom of his sickness.

2. Another prominent symptom is increased tendon reflexes, a tap on the patellar tendon produces a very active response. However repeated tapping produces progres-

sively weaker responses until finally the knee jerk is almost abolished for a brief period.

3d. Finally we have the various visceral phenomena as manifestations of this disorder.

a. Often circulatory disturbances are complained of, palpitation, a sense of cardiac oppression, perhaps even pain in the precordia of a greater or lesser severity causing the patient to believe that he has organic heart disease. Then commonly we find vaso-motor changes, a tendency to sudden pallor or flushings, profuse sweating, cold extremities, and similar phenomena.

b. Urinary changes occur more or less constantly, a profuse quantity is voided at frequent intervals, the color is unusually pale and the specific gravity low; however at times acute suppression may occur, or a dark concentrated urine may be voided.

c. Alterations in the sexual sphere are common being at times a loss of function, or on the other hand a greatly exaggerated sexual desire as is seen in cases of the sexual type of neurasthenia.

d. In addition to the digestive symptoms already mentioned, diarrhoea, constipation, gastralgia, enteralgia, etc., occur with many cases.

e. Disturbance of the special senses some times occurs, impaired vision, subjective noises, and similar sensations being experienced. In brief it may be stated that the visceral symptoms of this disease may correspond to the subjective symptoms of any organic disease.

MILK SICKNESS.

BY J. W. ALEXANDER, M. D.

Milk sickness or trembles is a specific disease well known to the inhabitants of some few southern and many of the states of the Ohio and Mississippi Valleys. It is communicated to man by the use of milk, butter, cheese and meat of the lower animals suffering from the trembles; and is a disease, and not a masked or modified form of some other undiagnosed disease.

This disease has been designated trembles

in the lower animals from the characteristic twitching of the muscles, and milk-sickness in man from the fact that it was first observed to be the use of milk and butter, that produced the disease.

Many different theories have been promulgated as to the etiology of this disease, but after a century's familiarity and knowledge of the symptoms and results, its true origin is as much shrouded in gloom as in the beginning.

Experiments on the lower animals by feeding with the milk and flesh of animals suffering with trembles, prove without the semblance of a doubt that the poison is a specific one and produces a certain train of well defined symptoms common to but this one disease.

The conditions necessary to its production are the following: First. It is a disease, almost without exception, of the autumn months and follows a season of scant rainfall. Second. That it is a disease unknown on prairies, but frequenting the groves and timbered streams of the above mentioned districts. Third. That if the animals are corralled during the nights and kept away from these infected groves, there is absolutely no danger in their roaming them, at will, during the day time, and it is mere theorizing when we attempt to say that it is the ingestion of some poisonous herb or poisoned water supply; or that it is a marsh miasm, or some mineral poison united with the dew; or that it is bacterial or fungous in origin.

That there is a period of incubation for this disease, I am quite certain, for one of the patients that died with this disease was taken sick with the prodromal symptoms one week after removing from town to the country and beginning the ingestion of the infected milk.

In our recent experience with the disease we had an opportunity of observing the symptoms both in the lower animals and in man. The gentleman owning the horses which died first noticed that they stood around in a dull listless manner with head down and with very little appetite. Their condition was attributed to influenza, an epidemic of which is afflicting the horses of

our community. He started with a heavy load of cane on a six-mile trip but before reaching his destination both horses were taken sick with trembling and refused to travel further. One died in about three hours, the other lived something less than a day, while a third that had not been exercised lived on for six days. The symptoms of the disease were the same in each case. The first thing noticed was a general indisposition of the animal. It refused to eat or exercise, stood drooping, listless and fearless. Later the twitchings or tremblings came on, the thirst was inordinate, the constipation persisting. Further on in the disease the animals laid down never to get up. The lips and tongue were greatly swollen, the respirations became shallow and less frequent, the pulse weaker and more rapid, and finally death supervened.

In the human species, the patients became apathetic, complained of being worn out, refused to take exercise or food; nausea and vomiting were present, and finally after these symptoms had run on four or five days they took to their bed. There was no chill, rigor, fever, or sweat. In not one of the five cases did the temperature exceed 99 degrees F. and in most of them it was subnormal. There were no bone or muscle pains and the severe headaches so common to typhoid and malarial fevers, were entirely absent. As long as the patient retained consciousness they complained bitterly of unquenchable thirst; the tongue was large, flabby, and covered with a moist white coating. The breath was foetid and so characteristic of the disease that many of the laity claim to be able to recognize it by this feature alone. The skin was dry and harsh, giving a sensation of coldness to the touch, and there was at no time perceptible perspiration. There was no distention of the abdominal cavity, neither was there any pain elicited by percussion or pressure. The bowels were obstinately constipated and peristalsis seemed to be absolutely abolished. As the fatal cases neared their termination it was utterly impossible to get any action from the bowels by medicines administered by mouth or by repeated high enemas. As mentioned above, nausea and

vomiting were marked symptoms, but at no time and in no case was blood or stercoraceous matter ejected with the vomited material. In the later stages of the disease the vomiting and retching ceased, probably from being too weak to make the effort. The heart's action, at first normal in every respect, became weak, rapid, soft and labored, and it was the paralysis of the same that finally ended the scene. The urine was clear, limped with a normal specific gravity, and at no time, from repeated examinations, showed evidence of any kidney involvement. It was gradually diminished in quantity and passed involuntarily in the bed.

There is a train of well marked mental symptoms that develops as the disease progresses. The patient is at first listless and apathetic. Does not appear to be solicitous of the condition of himself, family, or his friends. He makes no manifestation of affection or anxiety, and gradually passes from this to a semi-comatose condition. The respirations, at first normal, gradually became less frequent, scarcely perceptible and finally stertorous. Yawning is frequent and reminds one of a person just awakening from a profound slumber.

The pupil is dilated and responds to the stimulus of light until near the end. The eyes remain closed and no winking is observed in the last forty-eight hours. The semi-comatose condition gradually passes into one of deep coma, the eyes become glazed, the circulation fails, and the patient calmly and painlessly, without a moan or struggle, lifts the curtain that separates the mortal from the immortal and passes into the interminable darkness of the beyond.

As to the pathology, I cannot state whether or not post mortems have ever been held, but judging the conditions from what we can learn by physical examinations there appears to be no trace whatever of any organic lesion.

As to treatment little need be said. We get the cue from the fact that milk-giving animals are in a measure exempt from the disease. That they are exempt is due to the specific poison being eliminated through the excretories of the lacteal glands. The only

rational plan of treatment therefore that appeals to us is to eliminate this specific poison through the various emunctories of the human body, but mainly through the channel of the bowels. To this end we purge our patients freely with Epsom Salts; use judicious feeding by mouth if possible, and by rectum if necessary, and stimulate them vigorously with strychnine and whiskey.

A PLEA FOR A MORE CAREFUL STUDY OF THE KIDNEY.

DR. JAMES MILES, MEROM, IND.

In medicine we have but few specifics. Quinine is a specific for malaria, mercury for syphilis, and antitoxin for diphtheria. But outside of these our category of specifics is almost run. Therefore medicine resolves itself into the supportive and eliminative processes. Let either one of these be interfered with for any length of time and we find ourselves seriously handicapped in our efforts to relieve disease.

The supportive is carried out with drugs and food. The drugs most commonly used are strychnine, iron and arsenic; but these are only temporary for sooner or later the tissues demand food, the only true tonic, for no tissue can live and be healthful without being bathed in a rich healthful pabulum.

Nature has stored up in the tissues of the body food in the way of fats to be drawn upon to tide a person over diseases of short duration; but has made no provisions in regard to disposing of effete matter but says that sewage of the system must be thrown off promptly or pay the debt of toxemia.

In health and disease there is a constant degeneration of tissues. Toxines are generated by bacteria and through defective digestion there is always always more or less poisonous gases and acids absorbed. The avenues of escape for these toxic products are through the emunctories, the kidneys, bowels, skin and lungs. If there is a persistent inactivity of bowels, or a dry, harsh, pinched condition of skin, indicative of faulty elimination, there is room for grave apprehension as to prognosis. But there may

be both of these conditions, and still no immediate danger.

However it is different with the kidneys, if inactive for only a short time we see that hebetude gradually deepen into a profound coma. A coma that can not be produced with the strongest narcotics, and a condition that every effort to relieve is often futile, and we stand by helplessly and see our patient die of uremic poisoning.

Henle, Malpighi, Bowman and others have given us our histological anatomy and we are indebted to a number of men for their pathological researches, and perhaps all has been done in these two branches that can be done but I do not believe that renal therapy, and the study of clinical significance of non-eliminated materials have kept pace with our histological and pathological knowledge. The uriniferous tubules and Malpighian corpuscles are lined with different kinds of epithelial cells. As these cells excrete different materials we necessarily have a very complex substance in the way of urine. Physiologists say the fluid part is secreted by the glomeruli that the neck of tubules filter out the solids and that the ascending and descending loops of Henle liberate certain elements. Consequently there may be a normal corpuscle secreting an abundance of fluid, and a pathological lesion in some part of tubule, and a non-elimination of the solids. As these solids accumulate nature tries to eliminate them by a freer flow of urine. By their irritation the glomeruli are caused to redouble their efforts, giving rise to one of the worst forms of Bright's disease, chronic interstitial nephritis, the form I will speak of most, because it is the form most commonly overlooked and one, in which uremic symptoms must commonly occur. So deceptive and insidious is its onset. Patient complaining of only languor and debility. The objective signs such as oedema, anuria, etc., that characterize the acute and chronic parenchymatous forms are wanting. The patient and sometimes our selves are apt to think as there is an abundant flow of urine, no albumen or sugar the kidneys are intact. This is a grave mistake for sooner or later the patient will succumb to this disease.

The danger of diseased kidneys is their inability to throw off the effete matter of the constant degeneration of tissues, products of indigestion and other poisonous substances, giving rise to chronic uremia, which is manifested by periodical headaches, nausea and vomiting, temporary blindness and other symptoms. Another danger is the greater liability of the patient succumbing to some intercurrent diseases, as pneumonia, lagrippe, and typhoid fever on account of more rapid degeneration of tissues, and toxins being generated more abundantly during disease. And still another danger and one that is commonly overlooked, often with disastrous results is the non elimination of drugs given to relieve other diseases. Often in our zeal to relieve disease there is a tendency to over-medication. Even when elimination is perfect such drugs as digitalis, strychnine, morphia, calomel and others are accumulated. When there is diseased kidneys we may with digitalis be trying to relieve a mitral regurgitation and patient die with a tetanized heart. Some of the symptoms of uremia have already been referred to, and there is no diseased organ that gives a larger array of sequela than diseased kidneys. The solids of urine if retained have a similar action to that of malaria by depressing the sympathetic nervous system, causing a contraction of superficial capillaries giving rise to that anemic cyanotic look that is so characteristic of nephritis, and forcing the blood to the internal viscera causing both chronic and acute congestion of lung, heart and alimentary canal. The latter being effected most often on account of vicarious elimination. For instance a child suffering from cholera infantum stools and vomited matter green is uremic, and not bile as generally supposed by the laity. In these cases the routine method of giving opiates and astringents is irrational treatment, only adding fuel to the fire. Opiates only increasing the urea and astringents and emetics irritating the kidneys. In diseases of the respiratory tract and cardiac disturbances we often see marked relief from the administration of some saline as they not only act upon bowels but act upon kidneys as well.

As to treatment of diseases of kidneys, the mere fact that so many remedies are recommended is sufficient evidence that we are far from anything that is entirely satisfactory. If there is simply anuria the potassium salts are probably best. But while being efficacious in promoting diuresis they do not eliminate solids, the real danger. In fact they are contraindicated in the chronic interstitial nephritis where there is a super abundance of fluid and lack of solids. It may be the retained potash salts that is causing this too free flow of urine, by their stimulation of glomeruli. It is claimed that of all the retained pathological solids, potash is the most dangerous. As the soda salts are natural constituents of blood they are probably the best solvents, as they form soluble compounds, rendering the solids harmless and easily eliminated. Perhaps of these the phosphate is best, but I have seen marked results simply from the bicarbonate of soda, as illustrated in the following case.

A man, age 66 years, suffering from chronic interstitial nephritis. Do not know exact duration but under my care for over six years. All this time passing an excessive quantity of limpid urine, low specific gravity ranging from 1002 to 1010. No albumen loaded with earthy phosphates all the time and hyaline casts. Complicated with cystitis of worst form, and that disease incident to old men, hypertrophied prostate gland the suppuration of which proved fatal involving perineum and scrotum and necessitating evacuation with knife at different times. Dr. J. R. Hinkle of Sullivan, Ind., was called in consultation. Patient was in partial stupor from uremia. Our prognosis was that in twenty-four hours, stupor would be profound. Dr. Hinkle suggested we give sodium phosphate. As neither of us had any with us, we gave him 10 gr. doses of bicarbonate of soda every two hours. Instead of finding him in a profound stupor as expected at next visit, uremic symptoms had all disappeared and patient died of another complication, peritonitis.

As to diabetes whether the cause is in irritation of floor of fourth ventricle pancreas or whatever it is we look to the kidneys for

our diagnosis and prognosis. At present I am treating a patient for diabetes mellitus: female age 53 years, duration eighteen months, excessive flow of urine aggregating one gallon per day, sometimes more, specific gravity 1030, containing sugar and acid reaction, losing weight all the time having lost 40 pounds, dimness of vision so pronounced she could hardly recognize an acquaintance across the room; debilitated, nervous and irritable. When called to treat her I suspected malarial inflammation of kidneys. I put her on 4 gr. doses of bisulphate of quinine and one-fourth gr. of calomel every 4 hours until all malarial symptoms were relieved; then gave her five 10 gr. doses of bicarbonate of soda per day. Soda to be continued indefinitely, and repeating quinine and calomel as indicated. The result was that within two months the quantity of urine was 50 oz. in 24 hours, specific gravity 1020, no sugar, eye symptoms and irritability all relieved, regained about half of weight lost and the patient was in good spirits.

However the patient tired of taking medicine thought she was cured and left off treatment. The result was that after while the symptoms returned, the patient becoming very much alarmed. Put her back on same treatment as before with the same results and the patient is doing well at present. The bicarbonate of soda disintegrates the sugar and renders it harmless, for in glycosuria it is the presence of sugar that constitutes the danger. It is agreed by most clinicians that lithia does good although it is claimed that in the stomach it meets phosphates forming nearly insoluble compounds which prevent its reaching the blood, and it is even claimed by some that it lessens the excretion of urea as it deprives the blood of a part of the phosphate of soda.

Digitalis is usually recommended as a diuretic. This drug is contraindicated in all forms of diseases of kidneys; not only on account of its accumulative properties but causes a contraction of all the capillaries and blood vessels of the body, thereby lessening the excretive power of kidneys and skin. Besides in diseases of kidneys, especially cirrhotic kidneys the heart is always over work-

ed, as shown by the hypertrophy of left ventricle. The nitrates are far more efficacious. They lessen the work of heart by dilating the blood vessels and tubules. I prefer the sodium nitrate as it is not so exciting to nervous system as nitro-glycerine besides we have the solvent power of soda it contains. Every digestive organ should be stimulated to its fullest functional activity for the products of indigestion caused by overindulgence in eating and drinking are important factors to be considered. Uremic poisoning is the gravest of complications. We may purge and produce diaphoresis until exhaustion, we may give diuretics and use hypodermoclysis and often there is a poison we cannot eradicate or render inert. Something if we only knew what, we might render harmless. This can only be determined by urinalysis and the use of the microscope for nowhere in the field of medicine is the microscope of greater utility than here. From the urine we may be able to make a diagnosis of other diseases, for instance a phosphatic urine indicates excessive waste of brain and nerve tissue, and a diagnosis of chlorosis can often be made by analysis of the urine. The urine gives us also valuable aid in prognosis in diseases, outside of diseases of kidneys. In pneumonia the chloride of soda entirely disappears from the urine, and is a favorable indication when it begins to reappear. It also disappears in continued diarrhea and inflammations, and is diminished in all diseases. As this element is so necessary to stimulation of ganglion of heart, it is very essential that the blood be supplied with proper amount of it, especially is this so in pneumonia, where heart failure is the most common complication. By urinalysis we are not only able to distinguish some of the pathological elements in the body but may determine some of the elements, that are lacking in the physical economy. Some of the most common pathological solids found in urine are indican, skatol and ammonia. Indican being found in catarrh of stomach, diseases of small intestines carcinoma, and after taking such drugs as creosote, turpentine and nuxvomica. Skatol is a product of putrefaction in small intestines. And ammonia may be

absorbed from decomposing urine in the bladder, giving rise to ammonemia characterized by diarrhea, loss of flesh and finally death.

In conclusion, I will say we have volumes written upon the lungs, heart and nervous system respectively, but I have never yet seen a work devoted exclusively to the kidneys—an organ which when diseased may be the underling cause of disease in any organ of the body. It is true there is a number of works on urinalysis and genito urinary diseases, but it is rare that any work on urinalysis gives the clinical significance, cause or symptoms of substances found. And upon examination of works on genito urinary diseases I find that far the larger portion is devoted to the genito part.

E REBUS ET RATIONAE MEDICINAE USUS.

DR. JOE. H. WEINSTEIN, TERRE HAUTE, IND.

I have chosen for my subject the very appropriate motto of our Society.

There are none among us who doubt the soundness and value of this advice and yet we are, all of us, found guilty of using remedies without the valuable, co-efficient Common Sense.

We are visited times without number by representatives of pharmaceutical concerns who place before us the "outcome of valuable research" if we are to take their word for it.

I do not mean to desery or abuse those concerns that undoubtedly are earnestly striving to discover newer remedies and more certain and palatable ones.

The great difficulty with the strenuous life we are all now living is to take the "other fellow's" word for it that this preparation by Smith or Brown is a panacea.

In looking at my desk, I picked up at random a few advertisements of pharmaceutical houses and give you three examples of these. One is on a blotter and is an advertisement of a New York concern which claims to advertise to *doctors only*, and this one wonderful remedy is guaranteed to cure gastritis, constipation, diabetes, dyspepsia,

jaundice, dropsy, gout, rheumatism, and all liver, kidney, and stomach troubles; promoting the flow of bile, neutralizing uric acid, and dissolving gravel. Another reads: A cure for gout, rheumatism, uric acid diathesis, constipation, acute and cronic hepatic torpor, obesity, Bright's disease, albuminuria, asthma, incontinence of urine, gravel, cystitis uro-genital disorders, lead poisoning, headache, neuralgia, neurasthenia, lumbago, corpulency, hay fever, malaria, and reducing to a minimum the tendency toward apoplexy. One more example and I will leave this. It begins: Tonic, anti-spasmodic, appetizer, stomachic, invigorator, aphrodisiac; the tonic that tones, the strengthener that strengthens; indications: loss of appetite, indigestion, flatulency, hysteria, hypochondria, colic, diarrhoea, convulsions, weak stomach, difficult and painful digestion, liver troubles including jaundice, vomiting, sea sickness, lassitude, eructations, dyspepsia, headache; promotes peristalsis; promotes and materially aids in the formation of rich blood, and so I could go on ad nauseam.

We see these things every day and in every mail. They are no better than the advertisements posted on the bill boards and thrown around the streets, but the manufacturers think to catch the physicians by adding in big, black letters, "advertised to the Medical Profession only and sold only on physicians' prescriptions," and yet not more than a month or so ago I saw, sent to a relative of mine, an advertisement for a rheumatic cure, gotten up in fancy book style, setting forth the wonderful value of this remedy and wanting, if requested, to send samples. I warrant three-fourths of the physicians present have used this preparation in all innocence, thinking this concern perfectly ethical. This was none other than *Tongaline*.

I do not intend to convey the idea that I am hitting every house and doctor and do not want the older members to think it presumptuous upon my part, as a young man, to lay bare the skeleton. I will address myself to the men of my experience and younger, and if any of our esteemed elders gather any good, I will be doubly repaid for treading on slippery places.

The practice of medicine rests upon the wise combination of remedies and common sense. When one first begins to prescribe medicines he is rather inclined to give them with the expectation that they will do exactly as the text book told him and when the physiological action does not occur, he has a term of skepticism from which the majority recover but with some it becomes so thoroughly inoculated as to be incurable.

When these desired results are not seen the young man is very liable to pick up some of these so-called ethical preparations which make great promises; the older man is grasping after new things; the skeptic will give them because he thinks he might as well give them as anything and it is much easier to write a prescription for a proprietary remedy than to take the trouble to compound one.

There are hundreds among us I know who never use a proprietary remedy and I think they are as much in the wrong as the doctor who uses them almost to the exclusion of the art of prescription writing.

There are many meritorious preparations which have come into general use and many which have been recognized by the United States pharmacopeia.

The idea I wish to convey is embodied in the text, "common sense in the choice of these preparations."

We are coming to recognize more the value of *suggestion* and I think polypharmacy is on the decline at a more rapid rate than ever before. We are learning the value of common sense as a pharmaceutical agent every day. The ordinary hard-thinking physician can practice medicine with as much success today with a medicine case he can slip in his vest pocket as he could fifty years ago with one he had to carry in a buggy, and yet I believe there are more drugs and preparations on the market than ever before.

There are not enough physicians who take good journals. I do not recall the proportions but it is something less than twenty-five per cent of physicians that subscribe for a journal of any type and of these think of the number that take the "brief" class pub-

lished by anti-toxinists, anti-everything almost, which a great majority of thinking physicians know is true; a journal in whose editorials it advises the use of these concocted, unknown preparations almost to the exclusion of all other forms of medicine, and when we think that a vast majority of physicians read no journal (except when a sample is sent) and that this is the class sent oftener than any other, how can we expect them to keep up and use a *wise combination of remedies and common sense*.

Again, physicians are remiss in joining societies. Dr. McCormick, president of the Board of National Organizers of the American Medical Association, by whom we were recently favored with a visit, surprised me by stating that before they begun this reorganization that less than four per cent of the physicians in the United States were members of any Society. It is only by our society meetings and exchange of ideas that we can hope to grow. Out of our varied experiences we all glean the wheat of common sense and return to work with a better understanding of its application and the combination of remedies.

I do not mean to convey the idea that the *Materia Medica* affords the only remedies we have to rely upon. These are numerous, some of which I mention: Suggestion, exercise, dietetics, sleep, hygiene, work, rest, climate, etc. It is the combination of one or all with drugs and the basic principle *common sense* that insures the success of the practice of medicine.

"From fact and reason we our practice draw,
The firmest basis and the soundest law,
Whence nature's powers in fullest vigor rise,
And dread disease with all his phalanx flies."

These lines are from the title page of Wallace's *Practice of Medicine*, Edition of 1793, and something more than twenty years ago the first line was put in Latin by the late Professor Snyder of the University of Illinois and adopted as the motto of the Aesculapian Society. Foremost among those on the Committee for the adoption of the motto was Dr. Charles B. Johnson of Champaign.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

JANUARY, 1905.

NEXT ANNUAL SESSION, ROCK ISLAND, MAY 16, 17, 18, 1905.

OFFICERS:

PRESIDENT—W. E. QUINE, Chicago.

FIRST VICE PRESIDENT—H. C. MITCHELL, Carbondale.

SECOND VICE PRESIDENT, J. F. PERCY, Galesburg.

SECRETARY—EDMUND W. WEIS, Ottawa.

TREASURER—EVERETT J. BROWN, Decatur.

EDITOR—GEORGE N. KREIDER, Springfield.

SECTION ONE.

Practice of Medicine, Medical
Specialties, Materia Medica,
Therapeutics, Etiology, Path-
ology, Hygiene, State Medi-
cine and Medical Juris-
prudence.

M. S. Marcy Chairman
Peoria.

Fred Zapffe,
1764 Lexington st., Chicago.

SECTION TWO.

Surgery, Surgical Specialties,
and Obstetrics.

Geo. L. Eyster.....Chairman
Rock Island.

W. H. Wilder Secretary
103 State st., Chicago.

Committee on Prevention of Tuberculosis.

J. W. Pettit, Ottawa.

C. L. Mix, Chicago.

J. F. Percy, Galesburg.

Committee on Public Policy and Legislation.

Frank Billings, Chicago.

Carl E. Black, Jacksonville.

J. W. Pettit, Ottawa.

The Pres. and Sec'y, Ex-Officio.

Committee on Scientific Work.

M. S. Marcy, Peoria.

Geo. L. Eyster, Rock Island.

The Pres. and Sec'y, Ex-Officio.

The figures before the names
of the Councilors refer to the
Councilor Districts.

The Council.

(1) J. H. Stealy, Freeport.

(2) W. O. Ensign, Rutland.

(3) M. L. Harris, Chicago.

(4) O. B. Will, Peoria.

(5) J. Whitefield Smith, Bloom-
ington.

(6) C. E. Black, Jacksonville

(7) E. E. Fyke, Centralia.

(8) W. K. Newcomb, Cham-
paign.

(9) J. T. McAnally, Carbondale.

MONTHLY BULLETIN OF THE ILLINOIS STATE DENTAL SOCIETY.

The Dental Societies are at last having a revival. The latest evidence of this fact is the neat 16 page publication of the Illinois Society which has reached our table. The Society now has in its component county and section societies a number of members estimated at 1,000 and the number of eligible men not members of societies is nearly 2,000. A map of the State is printed showing the location of the districts after the manner of this Journal. The State Dental Society meets at Moline the week before our meeting. We hope that the meetings of both societies can be arranged at Springfield in 1906, during the same week so that a committee

from both societies can hold a conference and arrange for the legislation needed so much by both societies.

The Dental Society already has a committee to co-operate with the Illinois State Medical Society on matters of mutual interest. The members are Drs. T. L. Gilmer, D. M. Gallie, and J. P. Buckley, Chicago; E. K. Blair, Waverly; and G. D. Sitherwood, Bloomington.

Now that the Dental Society has arranged for a monthly publication there is no reason why it may not become a power second only to the State Medical Society in promoting the scientific and sanitary interests of the State.

REGISTRATION OF TRAINED NURSES IN INDIANA.

The trained nurses of Indiana will present to the Legislature now in session, a law similar to the one already in force in the States of New York, Maryland, Virginia, North Carolina, and New Jersey, providing for the registration of trained nurses and a Board of Examiners. The first section provides that upon the taking effect of this Act, *the Indiana State Nurses Association shall nominate for examiners ten of its members who have had not less than five years experience in their profession. From the said nominees the Governor of the State shall appoint within sixty days, a Board of Examiners to be composed of five members.* One of these members shall be designated by the Governor to hold office for one year; two for two years and two for three years.

It seems that Government by Boards, the bogy of our late lamenting Governor Yates, is not feared in Indiana and the other States possessing laws having provisions like the above.

GOVERNOR DENEEN.

Governor Charles Deneen took the oath of his high office Monday, January 9th, and delivered an inaugural address dealing sensibly with many subjects before the people. The labors usually falling to the lot of the Chief Executive were unfortunately interrupted by the serious illness of his eldest daughter requiring his hurried return to Chicago and his consent to an operation for her relief the next day. The operation for appendicitis, we are pleased to learn was a complete success and there is every reason for believing that Gov. Deneen will soon be permitted to return to the duties of his office.

* * * * *

The first day of the new Governor's term brought him in intimate contact with the

members of our profession and he is to be congratulated on having medical advisors of high standing and great skill; not all public men are sensible enough to consult medical men of good standing. During all his term of office he will have much to do with medical men and affairs. The most intimate association necessarily will be with the Secretary of the State Board of Health who is the only medical man having an office in the capitol. The Secretary's knowledge of the personnel of the profession and his advice in sanitary matters must frequently be sought by the executive in the discharge of his arduous duties. We hope the Governor's recommendation for this important office will be such as will receive the approval of the best elements of the profession. Notwithstanding the small salary of that office, such a man is available and the name of a man who will certainly be acceptable we learn will be presented to the Governor at the earliest opportunity.

* * * * *

One of the most important charges of the Governor is the proper management of the State Charitable institutions. For twelve years three different Governors have endeavored to use these hospitals for personal political ends with the result that each has failed to accomplish this purpose and the institutions no longer occupy the positions in the world that they at one time held. Probably no one thing contributed more to the overthrow of Governors Altgeld, Tanner and Yates than their failure to appreciate the needs of the unfortunate wards of the State. Gov. Hanly of Indiana has taken a stand on this subject which commends itself to every good citizen. We have every reason to believe that Gov. Deneen will profit by the mistakes of his predecessors and that high ideals and clean politics will have a

prominent place in his administration. This will certainly be true if competent men of high character are appointed as Trustees and made responsible for the proper management of the institutions under their charge and if civil service laws are enacted by the present Legislature according to the recommendation of the Governor in his first message.

QUACKERY IN ILLINOIS.

Quackery of all kinds never was in a more flourishing condition in Illinois than it is today. See address of Dr. Rafferty, p. 50 of this number of the Journal.

THE INDIANA PLAN OF MANAGING THE STATE INSTITUTIONS.

Just before his inauguration the Governor of Indiana issued the following statement regarding his management of the Public Charitable Institutions of that State.

"The Republican party took these institutions out of politics and placed them on a non-partisan basis, in fact as well as in name. I propose to continue that policy, so long established, and no man shall knowingly receive appointment either to the boards of control of those institutions or with those institutions except for peculiar qualifications and especial fitness for the services required, without regard to the question of political affiliation. To the unfortunate ones, who, because of misfortune or accident, or because of their own conduct or vices, who constitute the membership of those great institutions, I pledge my care, my highest consideration, my deepest solicitude. I know that these great charitable institutions of the State are the visible, tangible expression of a great people's breadth of sympathy and holy charity, and no act of mine shall knowingly divert them from the purposes intended by our splendid people."

Commenting on the above, the Indianapolis Morning Star says:

"That is the sort of talk that the truly charitable and humane like to hear, but it will not please the practical politicians. Mr. Hanly will not find it an easy matter to give full effect to his words, because the hungry job-hunters will beset him. It is to be hoped, however, that he will 'stand pat.' The public, regardless of party, indorses the lofty purpose to which he has given voice, and he can rest assured of warm support in any effort he may make to better the institutions whose roofs cover the State's unfortunates."

THE OTTAWA TENT COLONY.

The severest test for the climatic treatment of tuberculosis in a tent colony in Illinois is undoubtedly the winter season. If patients can live out of doors during the months from January to April and show improvement undoubtedly the treatment is proven to be correct. We are pleased to know that thus far the inmates of the colony are doing well and are well pleased with the accommodations provided for them. As a rule the patients prefer the tents to the indoor quarters. Dr. Pettit is untiring in his efforts to make them comfortable and his well-known executive capacity is bringing results under circumstances that would have baffled another less forceful man. We hope our readers will give every possible support to this enterprise in the success of which all should be interested.

Our readers will be pleased to learn that Dr. Pettit is rapidly recovering from a fracture of his left humerus, sustained by the overturning of his buggy.

MEDICAL DEFENSE COMMITTEES PLANS.

On the call of Chairman W. A. Evans of Chicago, a meeting of this important committee was held at the Leland Hotel, Springfield, Jan. 9th. Besides Chairman Evans, E. J. Brown of Decatur and G. N. Kreider of Springfield, members of the committee, were present. A plan of action was laid out which will be outlined in a report which will be printed in the February issue of the Journal. It is reasonably certain that this feature of the State Society work will be adopted at the next annual meeting and that each and every member of the State Society will be able to secure insurance for the sum of one dollar a year which will be vastly superior to that for which the insurance companies are charging ten or twenty times this amount.

Correspondence.

LAW OF EXEMPTION FROM GARNISHMENT.

Litchfield, Ill., Dec. 16, 1904.

To the Editor:

There is a matter that ought to be attended to by our legislative committee, and that is the laws of exemptions from garnishment. Now a man of family is allowed a homestead worth \$1,000, \$400 personal property and \$15.00 per week.

When the amount was \$8.00 a week a doctor every now and then could force some parties to pay; but not a great many mechanics and laboring men get \$15.00 a week.

It ought by all means be reduced to not more than \$10.00 per week.

Physicians should come under the labor clause or have only reasonable exemption laws.

Yours truly,

J. F. Blackwelder.

News Items.

Dr. M. V. Taylor has removed from Illiopolis to Dawson.

Dr. John McGinnis, of Dawson, will remove to Springfield.

Dr. Charles Molz, of Pana, has removed to Murphysboro.

Dr. G. R. Cowen has removed from Joliet to Granite City.

Dr. R. S. Mitchell has moved from Flora to Washington, Ind.

Dr. J. N. Thresh, of Beecher City, has removed to Danvers.

Dr. A. T. Rosenberry, of Oak Park, has removed to Watertown, Wis.

Dr. A. J. Garrison, of Hume, has removed to Buckley, Iroquois County.

Dr. J. R. Barrett has been appointed county physician of Logan County.

Dr. N. R. Gordon, of Springfield, has gone to California to spend the winter.

Dr. H. E. Thomas, of Chicago, has entered his automobile car for the Gordon-Bennett cup.

Dr. and Mrs. A. B. Carey will spend the remainder of the winter, after January 1, at Pensacola, Fla.

Dr. O. P. Hoppings' sanitarium building, one of the handsomest structures in Havana, has

been converted into a hotel, known as the Hotel Winsor.

Dr. J. L. Aldrich, of 343 43d st., Chicago, was recently arrested on complaint of a Mrs. Roblitz for an offense said to have been committed on her daughter.

Dr. John Flood, 455 Cleveland avenue, Chicago, recently paid a fine of \$50 in Judge Chytrous' court because he said that "Attorney Hynes has been a great bulldozer of doctors."

Dr. E. D. Kilbourne formerly of 6136 Madison st., Chicago, is serving with the U. S. Army at Calamba, Laguna, Philippine Islands. His rank is 1st Lieutenant and assistant surgeon.

Dr. L. C. H. E. Zeigler, of Chicago, has sued the estate of Mrs. Harriet G. McVicker, widow of the late theater owner for \$126,500. Dr. Zeigler's bill for nineteen months' service was \$100,000.

Dr. Alfred Schalek has recovered fully from his recent illness and resumed the practice of his specialty, diseases of the skin and genito-urinary tract, at 34 Washington street, Chicago.

Rev. Hugh T. Morrison, assistant pastor of the First Christian church, Springfield, has been obliged to abandon the ministry because of his health and has entered the Rush Medical College, Chicago.

Dr. Clinton E. Powell, of Alvin, Vermillion County, recently signed a petition in bankruptcy in the United States District Court, scheduling his liabilities as \$1,042 and his assets as \$369.

Dr. Geo. Paull Marquis has returned to Chicago from a prolonged sojourn in Vienna. He has taken an office in the Columbus Memorial building, and will devote his attention to diseases of the ear, nose and throat.

Dr. Ralph E. Niedringhaus, of Granite City, a graduate of the St. Louis College of Physicians and Surgeons, 1898, has been appointed a member of the State Board of Health to succeed Dr. C. B. Johnson, of Champaign.

Dr. Geo. Thomas Palmer, representing the Illinois State Board of Health, recently went to Sidell, Vermillion County, to investigate the report that six persons in that village had died because of cabbage worms. On arriving he found that the whole matter was a hoax.

Coroner Chas. Baer has retired, after eight years' service in Sangamon County. During this time he has held 647 inquests. There were 153 fatalities due to railways and street cars, 82 due to coal mines, 39 homicides and 84 suicides. Nearly one-half of all cases were due to intoxicating liquors.

Dr. D. J. Doherty, of Chicago, has been in St. Louis recently conferring with officials and native Filipinos of the Philippine reservation at the World's Fair regarding a plan he has formulated for a common language for the Filipinos. One of the Visayans will go to Chicago after the Fair to assist him in prosecuting the work.

Directory of Chicago Societies.

District No. 1—North Side.

Boundaries: The river, the North Branch, the lake, Belmont Ave.

President, D. Lieberthal, 1750 Wrightwood avenue.

Secretary, R. H. Herbst, 517 Dearborn avenue.

Meets on the second Thursday of each month at 8:30 P. M., at Chicago Academy of Science building, Lincoln Park.

District No. 2—North Shore.

Boundaries: Belmont Ave., the river, the lake, the city limits.

President, G. W. Green, 2765 North Lincoln avenue.

Secretary, Geo. E. Baxter, 1916 Evanston avenue.

Meets on first Tuesday of each month at 8:30 P. M., at Ravenswood Club House.

District No. 3—Evanston.

Boundaries: City limits, Northwestern tracks, the lake, the county line.

President, P. D. Harding, Evanston, Ill.

Secretary, Dr. S. V. Balderston, Evanston, Ill.

Meets on third Thursday of each month at 8:30 P. M., at Woman's Club rooms, Y. M. C. A. building, Evanston, Ill.

District No. 4—Northwest.

Boundaries: Kinzie street, the river, the Northwestern railroad, West Fortieth street.

President, M. H. Luken, 79 Ewing place.

Secretary, E. E. Henderson, 171 Humboldt boulevard.

Meets on first Friday of each month at 9 P. M., at Northwestern University Settlement building, corner Noble and Augusta streets.

District No. 5—West Side.

Boundaries: The river, Kinzie street, Twelfth street, West Fortieth street.

President, J. A. Robinson, 297 Ashland boulevard.

Secretary, J. J. Alderson, 576 West Adams street.

Meets on third Thursday at 8:30 P. M., in Cook County Hospital, Wood and Harrison streets.

District No. 6—Aux Plaines.

Territory: The city west of West Fortieth street, and suburban towns on the C. & N. W. in Cook and DuPage counties.

President, A. J. Rosenberry, Oak Park, Ill.

Secretary, G. P. Head, Austin, Ill.

Meets fourth Tuesday; place announced each month.

District No. 7—Douglas Park.

Boundaries: The river, Twelfth street, the drainage canal, the county line. Includes suburban towns on the C. B. & Q., R. R.

President

Secretary, C. D. Pence, 859 Turner avenue.

Meets first Monday of each month at Gads Hill Settlement, Robey and Twenty-second streets.

District No. 8—Stockyards.

Boundaries: The river and drainage canal, State street, Western avenue, Fifty-fifth street.

President, T. C. Gary, 2184 Archer avenue.

Secretary, R. J. Tivnen, 100 State street.

Meets on second Thursday of each month; meeting place to be announced.

District No. 9—Southwestern.

Boundaries: State street, Fifty-fifth street, C. R. I. & P. tracks, county line. Includes suburban towns on C. R. I. & P. R. R.

President, F. L. Rose, 5420 South Halsted street.

Secretary, C. H. Lovewell, Fifty-fifth and Halsted streets.

Meets on first Tuesday of each month at 9 P. M., at Grace Cafe, 540 West Sixty-third street.

District No. 10—South Side.

Boundaries: The river, State street, the lake, Sixty-seventh street.

President, J. L. Miller, 159 East Forty-seventh street.

Secretary, W. S. Harpole, 4827 Madison avenue.

Meets on—Thursday of each month at Vendome Hotel, Sixty-third street and Monroe avenue, at 9 P. M.

District No. 11—South Chicago.

Boundaries: Sixty-seventh street, C. R. I. & P. tracks, the Lake county line.

President, A. W. McLaughlin, 9139 Commercial avenue.

Secretary, J. S. Davis, 9139 Commercial avenue.

Meets in Dr. Harvey's office, Ninety-second street and Commercial avenue.

A regular meeting was held Nov. 16, 1904, with the President, Dr. John B. Murphy, in the chair.

Dr. Martin B. Tinker, of Ithaca, N. Y., read a paper by invitation, entitled **The Advantages of Muscle-Splitting and Muscle-Retractor Incisions in the Prevention of Ventral Hernia**, which was discussed by Drs. McArthur, Bevan, Andrews, Ochsner, Dudley, Cuthbertson, Beck, Goldspohn and, in closing by the essayist.

The Advantage of Muscle Splitting and Muscle Retraction Incisions in the Prevention of Ventral Hernia.

Martin B. Tinker, S. B., M. D., Ithaca, N. Y.: The very considerable number of ventral hernias, following clean, uncomplicated abdominal

operations, which probably come to the notice of every surgeon in active practice, should furnish ground for reflection as to the necessity for their occurrence. The number of these cases which have come to me during the past year has formed almost 4% of my total number of cases and with previous experience has led me to believe that the patients seldom return for the cure of their hernia to the surgeon who performed the original operation causing the hernia. The state of many of these patients, with their constant discomfort from wearing some form of abdominal support, with pain from adhesions about the hernial opening and with the not infrequent occurrence of symptoms of strangulation, often makes their condition but little preferable to that for which the original

operation was undertaken. The methods which have been devised for avoiding this disagreeable late complication of abdominal operations are well known to progressive surgeons, but that most of them are not always successful in preventing ventral hernia is shown by the frequency of its occurrence. The various methods of opening the abdomen which I shall discuss today are not altogether new and some of them are in use by many surgeons, but personal experience leads me to believe that their wider application is desirable. Before describing these methods and discussing the cases in which they can be used with advantage, it may be of interest briefly to review the expedients which have been adopted to prevent ventral hernia and their results.

In the few celiotomies performed in the days before the introduction of anesthesia, little attention was given to perfection of technic. The chief factors that have to do with the strength of the abdominal wall after operation; the location and method of opening the abdomen; the method of closure, and the materials used, were matters of little moment. Speed was the first consideration, the incision giving freest access to the work to be done was adopted and the most rapid method of closure was used, with little if any thought of its results. Even at the present day some surgeons find it difficult to get away from the old traditions and speed is to them still the first consideration in surgery. But with anesthesia and the greatly widened field of intervention that came with its introduction, thoughtful surgeons devote more time to the method of opening the abdomen and more care to its closure. Instead of the mass suture originally used, an increasingly large number of sutures in layers, thus placing and keeping each divided structure in apposition and greatly increasing the likelihood of firm union. With the advent of antiseptics and asepsis came the possibility of retaining sutures for a considerable time; either by the use of absorbable sutures or sutures specially arranged for removal from the various layers, thus maintaining apposition of like tissues for a longer time, a matter of great importance in the case of tissues which unite slowly as do the aponeuroses. Important as was the introduction of suture in layers and the use of absorbable sutures, the method of opening the abdomen is even more so. The ideal method should not cut across muscular or aponeurotic fibers, but should be parallel to such fibers; it should not divide nerves or vessels and in these respects all of the older methods are more or less faulty.

As Americans we remember with pride that ovariectomy was first practiced by McDowell, but probably not all who are familiar with this fact are aware that his first two ovariectomies were performed with incisions through the rectus muscle, parallel to the linea alba. Later McDowell abandoned this incision for the median incision. The median incision with suture of all the layers of the abdominal wall en masse with a through and through stitch was also practiced by Spencer-Wells, Dieffenbach, and many of the other early abdominal surgeons and it has several decided advantages; the

slight hemorrhage; the fact that no important nerves or vessels are divided; the free access to the pelvis and either side of the abdomen and its simplicity. But the fact that the incision in the linea alba is not parallel to the direction of the aponeurotic fibers puts the scar under the constant tension, and with the poor blood supply and consequent slow and imperfect union makes the occurrence of post operative hernia very common after this incision. This led surgeons later to adopt various other methods of opening the abdomen. The method through the rectus, originally used by McDowell was re-discovered, as is so common with surgical methods, and closure of the abdominal wall in layers was introduced. With the re-introduction of the rectus incision a modification was introduced, however; for the direct division of the tissues separation of the muscle fibers by blunt force so as to injure the vessels and nerves as little as possible was substituted. The rectus incision at the best is a rather bloody one, and usually leaves the fibers of the muscle on the median side of the incision paralyzed and although the occurrence of hernia after this incision is less frequent than after the linea alba incision, a number of other methods of opening the abdomen give better results. Langenbeck's incision through the linea semilunaris has the same objections and in addition is almost certain to paralyze the entire lower segment of the rectus. Kelly, Edebohl and Gersuny excise the linea alba entirely and close the abdomen in layers, bringing the recti muscles directly together in the median line with considerably better results than follow the simple median incision. Lawson Tait at one time used the incision parallel to the linea alba but just at one side of it. We cannot see that this method has any special advantages and it has not met with general favor. The more frequent recognition of appendicitis and of the necessity for operative treatment, has recently made the use of lateral incisions common and to the ingenuity and anatomical knowledge of McBurney we are indebted for the introduction of separation of muscle fibers in different planes so as to avoid the occurrence of hernia. This form of muscle splitting incision is suitable only for opening the abdomen at one side, however, and for pelvic surgery an incision nearer the median line is necessary.

To avoid the disadvantages of the rectus incision, specially the paralyzing of the median side of the muscle, Lennander of Upsala, Sweden, in 1898, introduced the rectus retraction incision. Making the skin incision over the middle of the sheath of the rectus, the sheath is opened and separated from the muscle to its median border; the muscle is drawn to one side with a retractor and the abdomen is opened back of the belly of the muscle so that when the incision is closed, the muscle by its own elasticity draws back into its normal position and the line of incision into the abdomen is covered by this thick strong muscle. In 1900, Pfannenstiel introduced his suprasymphysarian cross incision, which gives free access to the pelvis and organs near the median line of the body. The skin incision is made transversely below the

pubic hair line and the aponeurosis of the abdominal muscles is opened transversely over the rectus sheath. The fibers of the oblique muscles, which form the aponeurosis, run transversely in the direction of the long axis of the incision and hence their contraction does not put the incision on tension as is the case with the linea alba incision. After the aponeurotic structures are divided down to the recti muscles they are separated from the anterior surface of the recti. The bellies of the recti just above the symphysis lie in close contact and access to the abdominal cavity is obtained by retraction. When the retractors are removed the muscles tend to come in apposition and when sutured together the line of opening into the abdomen is at right angles to the incision through the fibrous structures forming the anterior part of the abdominal wall. In opening the abdomen for pelvic operations of any kind I usually employ the Pfannenstiel incision, though if freer exposure is desirable the Lennander incision is preferable. The Pfannenstiel incision has the possible additional advantage of placing the scar below the pubic hair line where it is not noticeable. It will be found very satisfactory for myomectomy; operations on the tubes or ovaries; advancement of the round ligaments for backward displacement; or other operations near the median line of the lower part of the abdomen. For abdominal hysterectomy the Lennander incision gives better exposure. For exploration of the right iliac fossa, where some involvement of the pelvic organs is suspected, I also prefer the Lennander incision. Where simple appendectomy is to be performed I think nearly all surgeons agree that the McBurney muscle splitting incision is preferable but when appendectomy is combined with work in the pelvis the Lennander incision is preferable. Operations in the upper abdomen are far less likely to be followed by post operative hernia, but as Richardson recently pointed out, the muscle splitting incisions in the treatment of diseases of the gall passages afford far greater security against the occurrence of ventral hernia.

There are undoubtedly other factors of great importance in the prevention of ventral hernia. Healing by first intention is of first importance; the specially careful arrest of hemorrhage to prevent accumulation of blood in the wound, not only lessens the danger of infection but favors firm healing. The prevention of strain on the wound after operation by distention is also very important. Undoubtedly the accumulation of intestinal gases can be greatly lessened, if not entirely prevented in most cases, by thoroughly emptying the intestinal tract before operation, and by careful attention to the bowels after operation. The avoidance of any strain on the wound by preventing post operative nausea and vomiting is important, also prevention of strain on the wound by the patient exerting himself too early. But with any of the muscle splitting or muscle retraction incisions which I have mentioned the danger of postoperative hernia is extremely slight. No doubt most surgeons have seen on the operating table how the contraction of the abdominal muscles during reaching under ether will close the McBurney incision. The ef-

fect on the Pfannenstiel incision is practically the same. While with the Lennander incision tension on the rectus sheath tends to stretch the scar, the interposition of the thick belly of the muscle is a sufficient barrier effectually to prevent hernia. With any of these forms of incisions I feel perfectly safe in giving patients a pillow immediately after operation, allowing them to sit up in ten days after operation, without there is some other reason for keeping them flat longer, and in dispensing entirely with the use of any abdominal supporter or bandage after operation.

The age of the patient or a very fat abdominal wall does not prevent a firm closure of any of these incisions.

A number of surgeons have furnished statistics of the results of different methods of closure of the abdomen. Semler in studying the merits of different methods of closure found 22 to 29% of ventral hernia following closure with the through and through suture of all the layers. When the peritoneum was sutured separately the number was reduced to 14%; with suture of the abdominal wall in layers the number of hernias was still further reduced to 6.8%. Winter using the separate suture in layers had 8% of hernias following. Silvermark and Hirsch (*Deutsche Zeitschrift fuer Klinische Chirurgie*, 1903, Volume LXVIII, page 81) found no occurrence of ventral hernia in a series of abdominal sections with Lennander's incision which were traced by letter several years after operation, and they quote Abel as having equally good results. Pfannenstiel and others have reported series of operations by his special incision with no postoperative hernia following. I have never heard of ventral hernia following the properly closed McBurney muscle splitting incision in simple uncomplicated cases and in my own cases I have yet to see ventral hernia following anyone of these muscle splitting or muscle retraction incisions.

It is certainly desirable that the surgeon should have the latest and fullest knowledge of purely scientific facts concerning conditions that he may be called upon to treat, no matter how rare the occurrence of these conditions; it is also worth while that he should be informed about Smith's latest modification of Brown's method of performing Jones' operation, but it is even more desirable that every surgeon should satisfy himself that he has adopted the very best way, when dealing with such fundamental questions as the opening and closing of the abdomen. Many surgeons will tell you that they have had only 1% of ventral hernias following a large number of abdominal operations; but how many know definitely the latter condition of their patients. There is but one way of determining this: personal communication with the patient; letter or examination; and the reports of those who have taken the trouble to get such definite later information show, as I have just stated, over 20% of ventral hernias following through and through closure; 14% with separate suture of the peritoneum, and nearly 7% with layer suture throughout, for incisions directly into the abdomen. Contrast the entire absence of hernia in those series of cases

where the muscle splitting or muscle retraction incisions are used. With a knowledge of these methods should we not consider even 1% of ventral hernias inexcusable? Everyone recognizes the advantages of getting the patient out early and freedom from after trouble with the muscle splitting incision for appendicitis: why not treat your simple hysteromyomectomies, excisions of the uterine tubes, excision or resection of the ovaries, and intestinal resections in the same way. By selection of one of these three methods we find ready access to the abdomen, in the median line or at the side, either near the rectus or out near the anterior superior spine.

The possibility of getting the patient out of bed at an early date following abdominal operation with a feeling of absolute security from hernia and without the necessity for wearing a binder is a great satisfaction and sufficient reward for the extra pains the few additional minutes of time required to open and close the abdomen by any one of these methods. The time has passed, I take it, when any surgeon would regard it as a reason for special pride or congratulation to be able to report one hundred consecutive uncomplicated abdominal operations without a death. Everyone expects the surgeon to save all his uncomplicated cholecystostomies and appendectomies operated upon in the interval as a matter of course. What occupies us chiefly at the present time is to shorten the time of convalescence and free it from unpleasant features, and to relieve the patient from the discomforts or dangers of later complications. We are all under moral obligation to our patients to do what we consider the best possible work for them, and a few additional minutes are well spent if they free the patient from the danger of a distressing after complication without additional danger to life. This can be confidentially claimed for the methods of opening and closing the abdomen which I have described. They are perfectly simple; they give ready access to the abdominal cavity for any usual operation and they have thus far proved an absolute safe-guard against this very disagreeable complication in the hands of a number of trustworthy surgeons.

On motion of Dr. E. C. Dudley, a vote of thanks was extended to Dr. Tinker for his interesting paper.

Dr. A. J. Ochsner: We are certainly indebted to Dr. Tinker for directing our attention again to the fundamental principles involved in closing the abdominal walls, making an incision, so that under any condition later on the contraction of the muscles will help to hold the abdominal cavity closed, incidentally applying broad surfaces to each other, and in that way securing a sufficient surface of union to prevent separation at the point of the incision.

Regarding the statistics mentioned, I agree with the gentlemen who have discussed the paper. Whoever has witnessed the clinics from which these statistics were taken, knows that several things are done which must result in bad union. In the first place, the incision is usually made very long. In the second place,

the tissues are handled with a great amount of roughness. In the third place, the stitches are not applied with a sufficient amount of care and accuracy in coaptating layers; and, in the fourth place they are tied so tightly, that they tend to cause pressure necrosis. Now, as a matter of fact, all of these are points which are bound to cause ventral hernia. We have in the abdominal wall conditions which are very favorable for obtaining permanent closure of incisions if properly united.

In a section through the median line, we have a series of tissues which, when accurately placed in apposition and held sufficiently long, as Dr. Bevan has stated to secure union, will very much more than suffice to bear any strain that may be brought upon this surface. We have the following layers; 1st peritoneum and transversalis fascia; 2nd on each side the large rectus muscle; 3rd the strong aponeurosis of the internal oblique and the external oblique which come together in the median line and form the linea alba proper; 4th the superficial fascia fat and integument as shown in Figs. I and II. These tissues are quite sufficient to withstand any pressure that may come from within, provided union is as it should be. Making a section through the median line at Fig. I we have this layer of connective tissue as you see it at the time of the section corresponding to the fascia on the median side of each rectus muscle, which is not favorable if we leave it in this condition, but if we open the inner sheath of the rectus muscle simply by splitting the linea alba longitudinally, then we have posteriorly the strong transversalis fascia, then the rectus muscle, then the aponeurosis of the internal oblique and external oblique. Placing the two muscles together we have the same condition that a carpenter uses in bracing a wall when he places a plank against a wall with a post against this plank. As a matter of fact, it is all nonsense to imagine that if you have union of all of these corresponding layers you can have a ventral hernia, unless drainage has been employed or suppuration has occurred. I venture to say that there is not one-fourth of one per cent of ventral hernia possible, provided those conditions are carried out. I have followed many hundreds of my cases, and in cases in which there was no drainage and no suppuration there was no ventral hernia. As shown in Figs. I and II we place a silkworm gut suture down through the transversalis fascia simply as an emergency suture, so that if the patient should sneeze severely at the time when the catgut has become softened, as happened in two of our cases, there will be a safety suture on the outside to hold it. We suture the peritoneum and transversalis fascia together; we pass a few interrupted catgut sutures through the muscle then we suture the aponeurosis of the external and internal oblique with catgut and after all these layers have been united we tie the silkworm gut sutures sufficiently loosely to guard against pressure necrosis. Furthermore, we apply for emergency's sake again broad adhesive strips, so that if the patient should strain, vomit severely, or sneeze,

the soft tissues will not be torn. Of course, there is a time when the tissues are so soft that a quick wrench may tear them. We take the additional precaution of always emptying the bowels thoroughly before operation and keeping them empty after the operation so as not to cause a great amount of intra-abdominal pressure.

I believe for cosmetic purposes the transverse incision advocated by Dr. Tinker is excellent. But there is no necessity of making it for the sake of preventing a hernia.

The McArthur incision is fine. The Lennander incision is an efficient one. In a gall-bladder operation, in a case complicated with appendicitis, the incision can be made through the outer edge of the right rectus abdominis muscle, which can be lengthened to remove the appendix also. In a case in which we suspect the involvement of both the appendix and an infection of the right ovary, an incision may be made lower down. For gall-stones and duodenal ulcer, a condition which is not uncommon an incision higher up carries out the principle which Dr. Tinker has pointed out to us. In a case of gastrostomy the same incision can be made on the other side. All of these incisions are certainly to be recommended, and in so far as our attention is again and again drawn to these facts, in so far will we be greatly benefitted. The important point, however, is that we must have broad surfaces brought together; we must not cut off muscles at a right angle unless we have to do so, as in the case which Dr. Bevan mentioned. We must not have pressure necrosis, which is due to tight suturing.

Dr. L. L. McArthur: Mr. President.—I think we should extend a vote of thanks to Dr. Tinker for emphasizing what we know all of us theoretically to be true, but which we have not always carried out. We are, as in other walks of life, creatures of habit, and having long been trained to follow the lines laid down by the masters, naturally have continued along these inclinations. At various times in the history of surgery there have been discovered methods for the ready access to various organs in the body, which at the time proved the most serviceable of the methods then in vogue. Somebody writing not long ago on a method of exposing and gaining access to the kidney called attention to the fact that in 1720 a surgeon had recommended separation of the muscle fibers of the external oblique and internal oblique near their junction to the margin of the quadratus lumborum, because under such circumstances there was less hemorrhage, and less subsequent trouble followed. And so it has happened in various other positions in the body, where new surgical procedures for old diseases had to be made new incisions were advised, and devised. I think that to Kocher, above all of our modern teachers, is due the credit for presenting in a systematic, though somewhat schematic manner the best lines of incision to follow. These have been prettily illustrated in his work on "Operative Surgery" in the early editions thereof. He describes the lines of cleavage. These lines of cleavage bear

a relationship always to three factors, to those lines in which the least tension will occur, to those lines in which the least destruction of muscular fiber or actual paralleling of muscular fiber will occur, and, finally, an important factor of those incisions in which the innervation of the muscles involved shall not be disturbed.

It has come to me, as to all surgeons, where new obstacles have to be met, that it soon became a simple matter to separate muscle fibers rather than cut them; that was speedily learned from the difficulty of suturing muscle fibers once cut. Muscle fibers run parallel with one another and should be brought end to end. As there is a small amount of connective tissue between them, it may prevent firm union or prevent the sutures from holding the muscle fibers together during the spastic contraction which takes place in the first few days of healing. A step further was made then to cut the tendons of these muscles, not cut the muscle fibers, so the tendons were cut at the junction of the edge of the rectus (Kamerer.)

It was found easier to draw the tendons together at the outer edge of the rectus than it was to draw the cut muscle fibers. Finally, cutting in the median line enabled one to bring the tissues better together than at other points, with less destruction to innervation.

The latest modification, and that which the orator of the evening has called our attention to, that of Pfannenstiel, parallels the tendinous fibers of the aponeurosis of the three abdominal muscles, and pulls temporarily out of position the uncut fibers of the recti muscles. In this way it simply separates the structures which, when the normal tonicity of the muscles is regained after anesthesia, the tighter they pull the more nearly the parallel fibers will be, and a few strands of temporary suture material will hold them in position. We should be willing to make advance. We should never be content to stop with a procedure because we have simply used it for years.

I must confess, that I am very much surprised that in any man's statistics, on careful investigation of the through and through suture in the linea alba in uncomplicated cases, where drainage has been unnecessary, that as large a per cent as one in five, or twenty per cent of hernia, should occur. It may be explicable on the basis that Dr. Tinker offers, that these patients do not return to the one who has been the cause of the hernia. It seems, however, an extremely large percentage to me. If my patients did not come back to me, I would like to know to whom they had gone after abdominal median incisions.

In the case of the gall-bladder, it is an easy matter to conserve the muscular fibers of the external oblique and the internal oblique, where the exploration of the gall-bladder and of the gall-bladder region is necessary. When it is then found necessary to make some more extensive surgical procedure, one of these layers may be sacrificed with the preservation of the other layer, and if we would preserve but one layer, it should be preferably the external ab-

lique layer, the strongest, best developed of these layers of abdominal muscles, which is done to hold the remaining cut portions of the incision intact until union can occur. I think a very decided improvement on the incision known as Kammerer's is an incision at the edge of the rectus, when, on occasion, we find it necessary to go into the pelvis for complications in operations which are associated with appendiceal work, as, for instance, ovarian tumors, suppurative tubes, twisted ovarian pedicle, with gangrene of the tumor. A case comes to my mind which I had this week, showing that it is very feasible to cut the posterior layer, preserve the external oblique, as it has been separated, cut the tendon of the internal oblique and transversalis downwards, and with retractors gain plenty of access, and yet have conserved the main factor in preventing hernia the ends of the external oblique, by having paralleled its fibres with an incision.

Personally, I wish to thank Dr. Tinker for again emphasizing the necessity of making advance in any line of surgical work.

Dr. E. Wylls Andrews: We are all familiar with muscle-splitting incisions, but I have never heard the subject so fully presented as it has been in this very luminous paper.

I will refresh the memories of those who may have forgotten on a little point of historical interest to the Chicago profession. In the year 1896, Dr. L. L. McArthur read a paper on muscle-splitting incision before the Chicago Medical Society. The paper described the grid-iron opening for appendix work, which nearly every surgeon is using at the present day. This paper was published, not in the succeeding month, but after the summer vacation, when the Society meetings were resumed. That same year we entertained Dr. McBurney, of New York. At this social dinner we took occasion to ask Dr. McBurney (as between the reading of the paper of Dr. McArthur and the publication of the minutes Dr. McBurney published this incision under his own name) who was the originator of this incision, and he was generous enough to state that in his opinion Dr. McArthur was entitled to the credit of having devised it first. I myself in teaching students have always called it the McArthur incision, and whenever I have had occasion to use the term in any written article, I have spoken of it as his. Dr. McArthur, too, called attention some years ago to the beauty of this method in opening the abdominal wall in kidney work. Dr. Bevan suggests that it seems like a poor method. The abdominal wall, however, when you think of it, with its peritoneal lining and muscular covering (referring to diagram), consists, until you reach the erector spinae muscles, altogether of these musculo-aponeurotic layers in three superimposed positions, so that as he clearly showed me at the time it is quite possible to get an opening extending from the border of the quadratus lumborum to the outer border of the rectus at this point (indicating), and by pushing the peritoneum and colon away from the kidney to get all the room you want for nephrectomies or for the removal of large tumors. This interested me very much, although I have not employed

it as much in a nephrorrhaphy as the vertical incision, because some three years ago, at St. Paul, during the meeting of the American Medical Association, Dr. Howard Kelly gave a long illustrated lecture with lantern pictures before the Gynecological Section, devoted to this one incision for reaching the kidney, several years after I heard the same thing from Dr. McArthur, I do not know whether he ever published it.

The Pfannenstiel incision I supposed until tonight was a skin incision only. I have only used it a few times, and I believe it is used almost solely in the case of young women and generally unmarried women, so as to get a scar which is covered up by the pubic hair afterwards, and as a matter of fact it is absolutely invisible, because it happens that nearly always about the pubes there is a little hair and your incision is crescentic, and follows the natural skin folds, you cannot see any mark after the patient is well. I had supposed that that was the real value of the incision, and did not imagine that it was used for any other reason. Each of us has a right to his own pet notions. In a median line incision, I say, do not let us have it in the exact median line any more. Do not make any more incisions through the linea alba, but let us go one-half or three-quarters of an inch out from the median line, and secure muscular edges to the suture line. In the upper abdominal wall, as in gall-bladder work where the rectus widens out, make your incisions through the rectus, make it in a vertical line; if we wish to have a large opening, we have to resort to the Bevan incision. This is an S-shaped incision as to the skin, but, as I understand, it is only skin that has a curved extremity, and the vertical part of the incision is practically a muscle-splitting incision. The lateral cuts, if made at all, are at a sharp angle with the ends, and in this way we cut it more of a Z-shape. I would like to say also that I attach a good deal of importance to the imbrication idea even in ordinary celiotomy. Not at all infrequently, as Mayo does in his transverse closure for umbilical hernia which, by the way, in his original paper he credits to me, in vertical celiotomies, and in even oblique cuts, I overlap these layers when I put them together, give them half an inch overlapping, just as a sail-maker in putting his canvas together makes a double thickness, thus having one suture line supporting the other suture line.

Dr. William Cuthbertson: I have listened to Dr. Tinker's advocacy of the muscle-splitting incision this evening with a great deal of interest. I think it is Pfannenstiel himself who recognizes the limitations of this incision, and it's inapplicability to the removal of large tumors or to the removal of appendices complicated by some pelvic difficulty where we may have a short meso-appendix or cecum.

I agree with Dr. Bevan very thoroughly in reference to the after-treatment of the patient. One point seems to be lost sight of, and that is, complete wound healing after operations in the abdominal cavity more especially. The experiments I have made on dogs in the past directed my attention particularly to this fact, that after

having opened the abdomen of a dog, forty-eight hours afterwards it is quite easy to open the abdomen again by simply pressing the finger down through the line of incision. In from four to five days it is hard to open the skin incision with the finger; it usually requires the handle of a scalpel, a Kocher dissector, or a moderately sharp instrument of that kind to reopen the skin incision. After having gotten through the skin, however, it is an easy matter with the finger to separate the abdominal muscles and reenter the abdominal cavity. I think that in all cases of abdominal operations we should not be in such a great hurry to get patients out of bed, unless they are old and feeble, but to give them a longer time to let wound healing be complete, and, furthermore, to follow out the lines of Kocher's teaching, to have thorough hemostasis before closing the abdominal wound, and not leave so much blood clot between the surfaces of the wound to become organized.

Dr. Carl Beck: Permit me to say a few words in regard to this incision, because I have had experience with the incisions of Pfannenstiel and Kuestner. It would seem from the remarks of the gentlemen who have discussed this paper that they rather object to this incision and think there is no need for it. In other words, that we have no need for such an incision because statistics show that there is a much smaller percentage of ventral hernia than generally accepted, and that the Germans have a much larger percentage of ventral hernia after operation than Americans have. Now, facts of the matter are a little different. The Germans have a larger number of ventral hernia statistics; they publish a larger number in statistics than do our surgeons, because they keep exact clinical records. Most of us here do not do that, and if our patients have hernia they do not come back to the same clinic as the patients do in Germany, and consequently our postoperative hernias do not appear to us as such afterwards, but they go to some other surgeon. The percentage of hernia, therefore, following these operations in this country is much greater than would appear from what has been stated. The Germans must be defended, although they hardly need it against one aggressive statement. They know the pathological conditions which bring about secondary union. It is not due altogether to drawing the sutures together too tightly, nor to the rough handling of the tissues so much, they do not handle them any more roughly than we do, but there are other factors which cause this secondary union, and these are also responsible for the occurrence of hernia here and abroad. Kocher has pointed out the fact that secondary union is largely and in many instances due to poor hemostasis in closing the abdomen. Blood clots are formed, and these accumulations of blood which, with germs or foreign bodies like catgut or silk, cause an aseptic suppurative, and from this aseptic suppurative secondary union takes place. There is a demand for such a transverse incision which has been called the Pfannenstiel incision. It was originally the method of Pfannenstiel but is now practiced as Kuestner's incision, with transverse splitting of fascia. The incision has its

advantages, because it insures better union of broader surfaces, as has been pointed out, and it has the additional advantage of enabling one to get into the abdomen through a comparatively small incision, even for large tumors. I have removed large fibroids through such a small transverse incision, because one can stretch the tissues; one does not split the muscles at all, but split the fascia. There is however one great disadvantage connected with this method, and Pfannenstiel has pointed it out himself, namely, that we open large surfaces. But separation and dragging of the fascia upward and downward we open large surfaces, and if we do not apply exact hemostasis, we invite secondary union, which we avoid in the vertical incision by putting in quite a number of sutures of catgut or of silk, and in closing the sutures prevent the formation of small pools of blood. I have had quite a number of suppurations formerly, but in my latter cases of transverse incisions I have been able to avoid this by putting in drainage even in aseptic cases clear down to the surfaces that have been separated. With the addition of tube or cigarette drainage, we can employ this incision satisfactorily, and can avoid hernia, which occurs in our cases probably in the same proportion as it occurs in the practice of German surgeons. In our country, it must be said, we do not keep exact clinical records of all our cases; if we did, and our patients all returned to us for examination, I think we would have the same experience as German surgeons.

Dr. E. C. Dudley was asked to speak on the gynecological aspect of the subject. He said: There is no gynecological aspect to this subject. The most practical single incision for exploration is one that is made near the median line. I generally use a median incision or a nearly median incision for combined pelvic work and appendectomy and a McArthur incision for appendectomy alone. The nearly median incision is made through the right rectus muscle, parallel with the fibres, that is, splitting the muscle somewhere near the inner margin of it. I have had no trouble with ventral hernia for several years nor so far as I know with paralysis of the muscle. I never use the through and through suture but always suture the wound, layer by layer, with twenty-day chromic catgut, first the peritoneum, then the posterior fascia, then the anterior fascia over the rectus muscles, then the subcutaneous fat, and then with a buried suture, the skin.

About six years ago, when I used the ordinary median incision through the linea alba and through and through sutures, I had quite a number of ventral hernias and attributed these unfortunate results to drainage; now when we drain so seldom, the hernias would probably seldom occur even with the through and through suture; surely they would be much less than the twenty per cent mentioned by the essayist.

I quite agree with the essayist that we should, as far as we can, use the muscle-splitting principle, and having adopted this principle, vary from it, when occasion requires.

I have learned something from the paper and

want to read it carefully when it is published. I am quite sure, after what has been said, that hereafter I shall use the muscle-splitting idea more than I have done before.

Dr. Albert Goldspohn: I think it is well for us to have the principles of this subject in our minds. So far as the statistics quoted by the essayist are concerned, I must agree with the majority of the gentlemen who have discussed the paper. My own impression is that the percentage of hernia following abdominal incisions is far less than that mentioned, by him, and from my own experience I am inclined to say that such hernia practically never follows from incisions that I can close up at once and entirely without drainage; and that it very rarely follows when a drainage tube or small capillary drain is left in for only 48 hours. This rather satisfactory experience I have gained after following the principles and deductions that were announced some six years ago, chiefly by the German gynecological society which had made it a part of its chief business for one year to carry on extended operations regarding this subject and the society reported the results in this respect in many thousands of cases. The fundamental principles to be observed in making a wound are that the blood and nerve supply to the parts that are to reunite be as little as possible interfered with, and that the incision be made along cleavage lines. In closing the wound the all-important features are that the aponeurosis in front of the recti muscles be carefully reunited individually, and that the peritoneum and transversalis fascia be correspondingly reunited by one tier of sutures posteriorly to the recto muscles, so that the layer will have the broadest possible coaptation surface possible without the interventions of any other tissue. If every second or third stitch of the continuous catgut sutures that unite the aponeurosis anteriorly is made to include the muscle beneath it is better. It is also advantageous to place three or four through and through silk worm gut sutures as the first act in closing the wound, because they relieve the tension upon the parts that are to reunite and prevent the accumulation of blood or serum in dead spaces between the several strata. I have found that it is sufficient to expose only one rectus muscle however, by incising only one rectus sheath along its median border delinea alba, in cases where the latter has not been widened by stretching, as is frequently the case in multiparous women. When the linea alba is not a membranous structure I open one rectus sheath immediately to one side of it and sever the expose rectus muscle from it without splitting or lacerating that muscle. If such a wound be a clean cut, be guarded from infection during the operation by being covered sufficiently with gauze sponges during the transit of infectious substances, fingers or instrument, be not too ruthlessly bruised with retractors and be finally closed in the manner above described it will practically never give rise to hernia later. The manner of coapting the skin and subcutaneous tissue is a matter of secondary importance and may be

left to the liking of individual operators and their notion about cosmetic achievements.

I know very well that none of us probably see his bad results because his patients are likely to go to other surgeons when they have a ventral hernia, but in that case, our colleagues discover them and would certainly not keep so silent about them.

Dr. Tinker (closing the discussion): No one recognizes their limitations of these incisions any more clearly than I do. I am quite in accord with what has been said, that in cases in which we have to have very free access to the abdominal cavity for rapid work, it is oftentimes necessary to go straight in. I also agree that certain operations cannot be performed with the use of these incisions which I have advocated tonight. I would simply like to have those who are accustomed to split the rectus, if they choose, to try instead the rectus retraction.

They will find it possible to complete an operation practically as quickly with the rectus retraction incision, and why not have the entire thickness of this muscle between the incision through the skin and anterior rectus sheath and the incision through the peritoneum instead of having the rectus split. It gives much additional strength and I do not think it will make three minutes difference in the opening and closing of the abdominal cavity. It gives as much room as through the rectus, additional security, less hemorrhage, no division of nerves.

With regard to the Pfannenstiel incision, it has many of the advantages just mentioned and is even more secure than the Lennander. Perhaps it takes a few minutes longer, but few sutures are needed in the closure, as the muscles tend to pull the incision together. I would also say that I would not have you believe that it is my custom to allow patients to get up in less time than a week, usually not until ten days after operation. Healing is not likely to be complete until that time. But I do feel perfect confidence in allowing a patient with one of these incisions to get up at the end of two weeks at the latest, without the use of any binder, and I have yet to see any evil results following. Perhaps the statistics which I have quoted put the frequency of ventral hernia too high; I am located in an institution where we see bad results. We get the old chronics and see the failures of others, and I regret to say, see ventral hernias from many large cities in this country, the results of clean work, of men of high reputation. This has impressed upon me the desirability of limiting the number of these unfortunate cases as far as possible.

A regular meeting was held November 30, 1904, with the President, Dr. John B. Murphy, in the chair.

Dr. Daniel N. Eisendrath read a paper on *X-Ray as an Aid in the Diagnosis of Strictures of the Esophagus*.

Discussed by Drs. J. Rawson Pennington and A. W. Baer.

Dr. Henry F. Lewis exhibited a specimen of *Fetus Papyraceous*.

Dr. J. Rawson Pennington read a paper on **The Etiology of Fissure in Ano**, which was discussed by Dr. E. J. Senn, and, in closing, by the essayist.

The following papers were read on appendicitis:

The Prevention of Appendicitis, by Dr. Wm. M. Harsha.

The Perilous Calms of Appendicitis, by Dr. R. W. Hardon.

The Mortality of Appendicitis, by Channing W. Barrett.

Discussed by Drs. A. Belcham Keyes, A. J. Ochsner, and the discussion closed by Drs. Hardon and Barrett.

Adjourned.

Discussion on the Paper of Dr. Eisendrath.

Dr. J. Rawson Pennington: I would like to say in connection with what Dr. Eisendrath has said with reference to the use of bismuth as an aid in making a diagnosis of dilatation of the stomach, that, so far as I know, the first work of this kind was done in this city by Dr. Metcalf, and the subject was presented before the Chicago Medical Society when we met in the Stewart building. I have also experimented some with bismuth in trying to locate the sigmoid and colon by injecting it through the rectum, and at the meeting of the American Medical Association, held at Atlantic City, June, 1900, in addition to showing a number of photographs, I exhibited a specimen showing the location of the sigmoid by the X-Ray, taken after bismuth solution had been injected into the rectum and sigmoid; but I did not consider it of any special value at that time.

Dr. A. W. Baer: Dr. Eisendrath spoke of dilating stricture of the esophagus. I would ask him if he has ever considered the mode of dilatation used by Newman with the negative electrode in dilating stricture?

Dr. Eisendrath: I wish to say, in reply to Dr. Baer, that I have had no personal experience with any other method besides bismuth in the way of dilating the esophagus.

Fetus Papyraceus.

Dr. Henry F. Lewis: This specimen is not of any greatly absorbing interest, so I will only occupy a short time in presenting it. It is a case of fetus papyraceus. The woman was delivered by Dr. Mary O. Porter a few days ago of a normal child. The labor was normal except when this placenta came. There are, as you see, by looking at the specimen two cakes here, one a large placenta which is practically normal, except that the cord is short. It was not more than fifteen inches long. The other placenta is entirely detached from the large one. The membranes between the large and small cakes are entirely clear and no vessels are seen anastomosing. I show you the placenta of the small fetus, the fetus papyraceus, which placenta is whitened and degenerated. We find this fetus flattened against the side of the uterus and against its own placenta. It has a cord which is inserted velamentously through the membrane, and finally reaches the small placenta at the upper portion. From its size, we would take it to be a three or four months

fetus. Therefore, this child must have died about that time, and was pressed against the uterine wall by the growth of the other fetus which was born alive.

There are two general ways for the formation of these feti papyracei. First, uniovular twins, in which there is an anastomosis between the vessels, where the heart of the lesser fetus is overcome by the heart of the stronger. The lesser fetus is thus killed and becomes flattened. Second, biovular twins, in which there is no connection by anastomosis with the small fetus, death of one twin being due to some unknown cause, the dead fetus becomes pressed against the uterine wall as the living ovum grows.

The Etiology of Fissure in Ano.

Dr. J. Rawson Pennington, Chicago, expressed the opinion that the theories usually accepted as the cause are erroneous and that a more comprehensive etiology is needed. He regards the location of the ulcer as anatomic, and as depending principally on the support given to the tissues of the anal canal by the sphincters and levator ani muscles. When the canal is over-distended the dorsal surface receives the least support from these muscles, the anterior the next, while the sides receive the greatest. At the terminal portion this relative support is due to the difference in the distance between the posterior commissure and the tip of the coccyx, the origin of the external sphincter, and the tendinous center of the perineum, its insertion and the anterior commissure. The posterior fibers of the muscle are more deployed than those of the anterior, hence, when pressure is made from within outward it is obvious that the weakest point in this muscle is at or near the posterior commissure; the next weakest point, at or near the anterior commissure. Therefore, when this canal is placed under sufficient stress to rupture its tissues, the tear, all things being equal, should occur first on the dorsal surface, as it receives the least muscular support; second, on the anterior surface, as it is the next weakest point, and lastly, on the sides.

Discussion on the Paper of Dr. Pennington.

Dr. E. J. Senn: I find a considerable amount of literature on a pathological condition of so little consequence as anal fissure. Dr. Pennington made the suggestion, or it was his idea that the fissure was due to the posterior quadrant of the anus being in the most fixed position. While he was reading his paper the little manual written by Mr. Ball in 1894 came to my mind, because I find a considerable part of this paper has been adapted from Ball's manual. Dr. Pennington believes that fissure in ano is due to the lack of muscular support. He lays more stress on that fact than upon the fixed position of the posterior quadrant; while Mr. Ball states emphatically that fissure is due to the fact that the posterior quadrant is the most fixed portion of the anus, due to the position of the ano-coccygeal ligament. Other authors have said the same thing. It stands to reason, if we know the physiology of this part, that in the descent of the fecal mass, as it passes over this very

delicate portion of the anatomy, especially in constipated individuals, the most likely point for a tear to take place will be the most fixed point.

Mr. Ball also brings forward the fact that he has demonstrated time and again that fissure is due to the tearing of one of these small valves of Morgagni. He makes a comparison between a small portion of flesh that is torn away, for instance, about the matrix of the finger-nail, and is the source of considerable irritation, and fissure, and says that the only way to eradicate this condition is to remove the hangnail. The same is true in regard to anal fissure. The fact that an anal fissure persists is due to the reflex action of the sphincter muscle. It is a fact probably well-known to you that the sphincter muscle contains a greater nerve supply than any other muscle in the body, and the continual spasmodic action of this muscle is the reason why these fissures do not heal; and probably another feature is because the posterior portion is more fixed, and therefore it does not give as readily as do the lateral quadrants of the anal ring. Naturally the irritation is much less, but in the posterior portion, where it is fixed, whenever the fecal mass descends, it is more apt to lay bare a small surface, and therefore the persistency of these cases.

Dr. Pennington (closing the discussion): I said nothing about the fixed portion of the anal canal in connection with fissure. This subject I have carefully considered on a previous occasion.

I will exaggerate this diagram, because it will enable me to show the point I desire to make. Here we have a diagram of the male and one of the female anus. The point made by Dr. Senn that the fixed portion is more easily torn apparently is true in the male, because if we make a comparison it will be found that the posterior part of the anus is nearer the coccyx in the male than it is in the female, consequently it is the more fixed, and fissure should occur in the posterior quadrant more readily in the male than it does in the female, and statistics show that to be true. The anus in woman is nearer the perineum than it is in man; it is farther from the coccyx in the female than it is in male. The anal canal is more fixed anteriorly in man than it is in woman; therefore, according to the same argument advanced, anal fissure should occur more frequently in the anterior quadrant in man than woman. But statistics do not show that to be the case.

In regard to the anal valves, and the causation of fissure as given by Mr. Ball, I quoted Mr. Ball in my paper I gave him credit for his theory, not deeming it necessary to mention his name any more than I did the names of Tuttle, Gant, and Mathews, whom I quoted, without mentioning their names. Mr. Ball's theory of the causation of fissure is a tearing-down of one of the crypts of Morgagni. That is the very point I made. If the tearing-down of the anal valve is the cause of fissure, why is it the anal valve near the posterior commissure is caught in the fecal mass ninety-nine

times out of a hundred in men, and about ninety-two times in a hundred in woman? If the tearing-down of the anal valve is the cause of fissure, why does not the anal valve on the anterior quadrant become caught in this mass more frequently, or why does not fissure occur more frequently in children and young people than it does in adults? In children the anal valves are more distinct and more fully developed than in the adult, and yet Ball himself says, regardless of his theory, that fissure occurs more frequently in the adult, so that his theory and the location of the fissure do not correspond. It is undoubtedly due to the support given to the tissues, and as I have previously remarked, I have demonstrated this experimentally on those who were asleep, and on those who were not asleep, because you can introduce a dilator into the anus, and tear the anal canal by it, if you know how to introduce it properly, and you will find what I said in my paper is true that it almost universally occurs on the posterior quadrant when the patient is asleep or awake.

The Prevention of Appendicitis.

William M. Harsha, M. D.: The author stated from available figures it would seem that appendicitis is more frequent in our country than elsewhere. This is on the assumption that the mortality rate is much the same in England, Germany and France, where modern methods both of medical and surgical treatment are practiced, and where statistics are or should be reliable. Possibly more detailed information relative to our whole country might give different results.

In Illinois, with a population of about 5,000,000, there were in 1903, 471 deaths from appendicitis, or 94 per million. In Chicago alone, which represents nearly two-fifths of the population of the entire State, in 1901 there were 429 deaths: in 1902, 262, and in 1903, 261, being at the rate of 140 per million.

The same high death rate, as shown by the statistics cited by the author, is approximated in other cities of our country, especially in similar latitudes.

As to foreign countries and cities, in England and Wales, with a population of about 33,000,000, there were 1,244 deaths from appendicitis and perityphilitis in 1901, or 38 per million. In 1902 there were 1,485 deaths, or 45 per million.

After citing the statistics of large cities in the United States and England, of Paris, Vienna, etc., the author states that it would seem that in cities of like size, and where modern methods obtain, there is a less mortality abroad, especially in England, than in our country.

Considering the causes that may be influenced by treatment, the author believes errors of diet the most frequent. The disease occurs more frequently at the age and in the sex where faulty habits of eating and errors of diet are most common. It is common to see attacks follow an immoderate meal, or the ingestion of indigestible articles of food. If one

has transgressed in either of these ways and feels the approach of an acute digestive disturbance, the rational treatment is the promptest possible evacuation of the whole digestive tract, keeping it empty and urging strict recumbency. Cholera morbus ushers in many cases of appendicitis, which is regarded as the primary trouble. That is, acute digestive disturbance irritating the mucosa is followed by stenosis of the base of the appendix and the infection follows. This, the author has observed, formerly in a considerable general practice.

Colds also ushers in attacks of this type. Right living is the treatment. This means avoidance of wet feet and drafts; keeping the vital powers up to par by avoidance of dissipation, overwork or worry, and proper heating and ventilation of our houses; also care as to diet.

While fecal concretions or foreign bodies are less frequent causes of appendicitis than was formerly supposed, they cause probably 10 per cent. of cases. From the slight but somewhat frequent attacks, with little or no temperature, followed by prompt recovery under treatment by absolute rest and starvation, he has several times found, as he expected, fecal concretions with or without foreign bodies. In many of these cases there is a stricture proximal to the concretion. The proper preventive treatment in this class of cases is operation. After one such attack, especially if there is any bar to operation, it may be tried to wash out with salines with some chance, probably better than we should have in efforts to expel gall-stones.

Flatulent dyspepsia, which is held to be a frequent cause by many authorities, is amenable to treatment generally by diet, exercise and remedies to relieve the atony of the colon.

The author quoted George Rubin, who has shown by experiments how a distended cecum may admit foreign bodies into the appendix that could not be made to enter otherwise.

It is probable that flatulent indigestion or constipation with fecal stasis in the cecum not only favors admission of fecal matter into the appendix, but also by dragging or torsion causes kinking or closure of the lumen, or other irritation or abrasion of the mucosa inviting the infection.

Traumatism by injury from without, or from muscular strain, is a cause of appendicitis in a small per cent. of cases, and the preventive treatment is summed up in the one word, *caution*.

It is obvious from the mechanical factors that figure in this disease and the numerous conditions that attend or precede the attacks, that no rule can be made to apply in every case. It may seem to be petty attention to details to consider some of those items which he believes are potent as preventive measures; but in the practice of the profession no one knows better than the surgeon the importance of attention to just such details in order to get the best results. It is easy to advise and do operations, and in cases of progressive infection the author believes in operation in the early stage, that is, twenty-four to forty-eight hours, as he does in recurrent cases, and in

some instances after even one attack; but there are people who will not consent to operation, and others in whom diabetes or other contra indications may be present, and on whom we dare not operate. There are also many cases that cannot secure competent surgery on account of their location. The individual case must be considered by itself, its etiology carefully studied, as well as any peculiarity, and treatment adapted accordingly. In one case it will be necessary to regulate the habits of eating; in another to cultivate immunity from colds or proper habits of exercise, while digestive disturbances of various kinds will require attention in others. In all, the proper hygienic conditions should be secured to keep the vital resistance up to the highest point.

During the past six or seven years the author has advised these measures as preventive after one attack in which there has been no operation, and so far as can be known, he believes recurrence has not taken place in over 20 per cent. of the cases, most of these being in young people, partly because of the greater frequency in the young, and in part, he believes, because of lack of intelligent co-operation on the part of the patient. The consensus of opinion is that about 50 per cent. of cases not operated recur.

The Perilous Calms of Appendicitis.

Dr. Robert Wallace Hardon, Chicago, presented these conclusions: 1. Defervescence of symptoms and apparent better conditions of the patient do not always mean recovery, but may precede a dangerous condition. 2. As there is no specific for the disease, no matter what treatment is used, the one who procrastinates should shoulder the responsibility for the death. 3. When a clear diagnosis is made only one treatment should be advised, operation as soon as possible, or the opportunity may be gone. 4. The physician who does not explain the great dangers of delay and the small comparative danger of operation, is doing his patient a serious injustice which often leads to fatal results. 5. Operation at the proper time usually greatly shortens convalescence, and eliminates all danger from this cause thereafter. 6. Procrastination is the greatest cause of surgical death, operation often being performed as a last resort when little hope of recovery exists.

The Mortality of Appendicitis.

Dr. Channing W. Barrett, of Chicago, read an interesting statistical paper on this subject, which was accompanied by a series of tables. Table I showed that Chicago still had a mortality in appendicitis about equal to .01 of the mortality from all causes. Table II showed that the percentage of female mortality from appendicitis varied very little from the percentage of female mortality from all causes, and that appendicitis was to be looked for as common in the female, notwithstanding the old belief that it was rare. Table III showed the greatest mortality at the best period of life, early adult life, the greatest number dying at any one year of age being 22 at the age of 19, the average age for all deaths being 26.34

years. Table IV showed that leaving out the chronic cases the average duration of the disease in the 372 cases in which the time was mentioned was 8 33-76 days. Murphy's mortality cases showed that the average time after operation until death was 2.8 days. This demonstrated that this vast number of fatal cases were operated upon at the end of the sixth day, while all authorities conceded that an operation on the first or second day was safe and desirable. Table I showed that the most frequent cause of death from appendicitis was suppuration of the appendix, caused by perforation, gangrene, or passage of the infection through the wall, and peritonitis; and, further, that adhesions and obstruction were common. Many patients did not have the advantage of hospital treatment or an operation. An early diagnosis was most desirable, yet the Bureau of Vital Statistics considered that a diagnosis was not made at all in 105 cases; a few of the remainder were made by the coroner. Some were made post-mortem, and one could never know how many were made too late for any operation to save life. The long, but only partial list of vague diagnoses copied from the death certificates, showed that in all probability some cases escaped detection. The author submitted the following conclusions: (1) An early diagnosis is of the first consideration. (2) All troublesome appendices should be removed without waiting for an acute attack. (3) All acute cases should be dealt with surgically in the interval between the onset of appendicitis and the dangerous rupture, without waiting for pus outside the appendix, for peritonitis, for adhesions, or for a possible but remote interval. (4) Cases of perforation or gangrene, with localized abscess, should be operated with drainage or removal of the appendix, according to the judgment of the operator. (5) Patients with perforation or gangrene without a wall of adhesion are in still greater need of an outlet for the infection to lessen the tendency of infection to travel inward. (6) Price, Murphy, Hawkes, and others, have shown a better percentage of recovery by the operative treatment of acute perforative peritonitis. (7) A case of acute appendicitis should be operated upon at any time if the patient's condition will admit of an operation, unless the case is rapidly, and beyond a question of doubt, convalescing. In this latter case we should wait until all acute symptoms have passed. (8) Healthy appendices should be left alone. (9) Proper treatment does not contraindicate the use of stomach lavage, or the withholding of food, and when proper these things should be employed, with or without operation. (10) Life is not the only consideration. The time of cure and after-conditions are important. A patient going through an acute attack without operation is saved by the adhesions. Adhesions are life-saving for the time, but they may be death-dealing afterward. The waiting treatment favors adhesions; early operation avoids them. An early operation sends the patient home in from ten days to three weeks. Twelve cases treated by the rest treatment, reported in the *Journal of the American Medical Association*, June 22, 1902,

show an average of 60 7-12 days from the onset of the disease to the discharge of the patients from the hospital.

Discussion on the Papers of Drs. Harsha, Harndon and Barrett.

Dr. A. Belcham Keyes: Mr. President—I wish to congratulate the gentlemen upon the very interesting papers they have read before us to-night. It seems to me, that in papers of this kind we could dwell with a good deal of benefit for the general profession more on the pathology of appendicitis.

Dr. Harsha, in his paper, if I may be allowed to criticize him a little, talked about indigestible foods. Now, prophylaxis is the greatest point in all medicine; yet he never mentioned a single food to say what is indigestible and what is digestible. First of all, I would say that among the favoring factors for appendicitis ordinarily is much drink while eating and cold drinks; anything that disturbs the stomach or mouth digestion of starchy foods, so that it undergoes fermentation, e. g., rapid eating, especially of those indigestible, stringy or tight, starchy products like old string beans, turnips, cabbage or soggy potatoes, carrots, parsnips, that have not been sufficiently chewed.

In our papers on appendicitis we should talk about the things that are enlightening to the profession, and, instead of talking of sharpening knives on the first, second or third day, let us come down to the pathology and learn our physiology, and learn what will be useful for the average man in our society discussions.

In considering the routes of infection, there are four ways that infection reaches appendix. One of the first, and little thought of, and almost never mentioned in our societies and medical journals, is that from the peritoneal side, perhaps comparatively rare. The one always mentioned and that is most usual, is from the mucous membrane side. We have two other ways in which the appendix may be attacked, but which can almost be dismissed, except in a few cases, and those routes are by way of the lymphatics and blood vessels. I sometimes think we could better divide our cases of appendicitis into endo-appendicitis, appendicitis, and periappendicitis. It is because diagnoses were not made formerly that we to-day derisively talk of the men who spoke about perityphlitis; but perityphlitis is as pathological as anything we have in medicine to-day. Formerly, men failed to make accurate diagnoses in these cases until the patients died of peritonitis; and then they made post-mortem examinations and found out what caused death. Therefore, I do not think we should ridicule the work of the old pathologists. If we read their books carefully we will find that we have simply reclassified what they pointed out to us years ago.

With regard to the symptoms of appendicitis, we have not had them rehearsed sufficiently. The patient who ordinarily calls in the attending physician in the acute stage complains of pain which is pretty well diffused over the en-

tire abdomen, very much as a toothache is diffused, when it is severe in the acute stage of pulpitis, so that we even do not know which side of the jaw the toothache is. In appendicitis, later, as the acute symptoms subside, we have pain referable to McBurney's point, associated frequently with vomiting, but not necessarily always. There is nearly always constipation, from the first or at least after one or two passages which clear the bowel below the point of the appendix, especially if the whole thickness of the appendix is involved. The bowels do not move for the same reason that ordinarily we do not have bowel movements in cases of young children with enterocolitis; the infiltration of the bowel musculature will not allow peristalsis, i. e., muscular contraction of the bowel wall to take place, and the consequence is constipation results. This occurs whether the bowel wall be attacked by inflammation from the peritoneal side, or from the mucous membrane side, i. e., whether it was primarily an endo-appendicitis, or peri-appendicitis, because the musculature is involved, and a place in the bowel where there is no longer peristalsis of the colon on one side, and of the cecum on the other, of the inflammatory site. We are told frequently that we get dullness on percussion in these cases, which is due to an exudate, but in early endo-appendicitis there is no exudate at all, but the relative dullness is due to the condition of the bowel, in which the tenseness of the bowel is less, much as we get a relative change in the percussion note due to a slackening of the apex, so in appendicitis we get a relative dullness or less tympanites over the right iliac fossa. Again, palpation should be performed systematically, beginning in the left iliac fossa, gradually passing toward the right fossa. If you do this gradually, you will be able to locate the pain in these cases. If you proceed in this manner, both for percussion and palpation, one will not make as many mistakes.

We must have method in doing things, and the consequence is we fall down in a decisive diagnosis. I do not think I have failed in any case in making a diagnosis of appendicitis, and also the stage it was in, simply because I was methodical. And to make a decisive diagnosis is our guide in deciding to indications for or against operation. To operate too early in acute attack is apparently as fatal an error as to operate too late, the time for excellence being after the acuteness has subsided.

Dr. A. J. Ochsner: I am very glad indeed that the subject of appendicitis comes up about once in so often, for the reason that it gives rise to some enjoyment to many, and it gives us an opportunity to reiterate a definite plan of treatment of certain cases of this disease which I advocated some years ago. It also gives an opportunity for slowly reducing the number of errors that are committed in this form of treatment. When no less a man than Dr. Mayo, of Rochester, Minnesota, says that this treatment has reduced his mortality to one-fourth of what it was before in cases of perforative appendicitis—when a man with an ex-

perience of several thousand appendicitis operations makes that statement, I believe that it deserves to be recognized in a measure. The reason why these results were obtained in his cases and in the cases of many hundreds of practitioners over this country is because they actually followed the method as it was advocated when it was first brought to the attention of the medical profession. That there are dangers from misinterpreting the method there can be no doubt. I practiced the method myself from 1892 until 1900, without publishing it, simply speaking about it to certain persons, especially men of great experience like Dr. Mayo and a number of others, and asking them to try it and to observe their results before I publish it. I treated many hundreds of cases by this method before I announced it. When I announced it, I did so in a very definite way, so that if anyone took the trouble to pay attention to the announcement, he could not but get the method right. Fortunately, the medical journals in various parts of the country took the trouble to publish this announcement. I have one journal here from California, one from Alabama and so the method has been published quite extensively all over this country. The conclusions which are contained in all of my writings advocating this form of treatment are definite. Before I proceed to discuss them I wish to speak of one point that has been mentioned a number of times tonight, namely, the matter of diagnosis. It is ordinarily not a difficult matter to make a diagnosis of appendicitis. Our distinguished president pointed out this again in an article a few weeks ago, saying that if a careful examination is made, it is almost impossible not to make a correct diagnosis, and I believe that is the case with my own experience in appendicitis work. I have found that a mistaken diagnosis usually occurs in this way: A patient has stated that he felt pain in the abdomen; was nauseated; that he had eaten something that was indigestible, was sick, and thereupon a diagnosis is made without the aid of a physical examination. If that same patient had been carefully examined, as indicated by Dr. Keyes, that is, if a careful physical examination had been made, the diagnosis could have been established beyond a doubt.

I will take one of these journals and read to you the conclusions which I announced, and which hold good today, and which will always hold good. These conclusions are being followed by thousands of practitioners all over this country, from whom I have received an enormous number of communications, stating that in each case in which the conclusions were followed, the mortality in the practice of the particular practitioner was considerably reduced, and there has not been a practitioner, who, after following these conclusions, has reported differently. All of those who have followed the conclusions have had the same experience, namely, a greatly reduced mortality in this class of cases. I might say in this connection that two years ago Deaver tried this form of treatment in some cases, and found it wanting. But, as a matter of fact, his assistant told me personally, after going through these con-

clusions carefully, that they had not strictly followed my directions although at the time he imagined that they were following them. However, he has since evidently come to a different conclusion, because in a recent article Deaver makes this statement: "In the class of cases in which the medical attendant has not been called in for two or three or four days after the onset of the attack, and when the case has advanced to general peritonitis, with marked distension of the abdomen, high temperature, rapid pulse, persistent sick stomach, the treatment recommended by Ochsner, of Chicago, known as the rest treatment, will perhaps accomplish the most."—(Kansas City Medical Index-Lancet.)

As regards these conclusions, I will read them to you from this medical journal:

1. Patients suffering from chronic recurrent appendicitis should be operated on during the interval.

I am sure that everyone will agree with that conclusion.

2. Patients suffering from acute appendicitis should be operated on as soon as the diagnosis is made, provided they come under treatment while the infectious material is still confined to the appendix, and if a competent surgeon is available.

I do not see how it is possible for anyone to disagree with that conclusion. The only thing that one might disagree with is the last phrase, "if a competent surgeon is available." If the surgeon is not competent and does nothing except to open the peritoneum and close it again, the mortality would be very much greater than that from perforative appendicitis treated by the starvation method, and consequently, if there is no competent surgeon available, the patient is better off if he is not operated.

3. Aside from insuring a low mortality, this will prevent all serious complications.

There is a reason given in this conclusion for operating while the infectious material is still presumably confined within the appendix itself. The complications which can be avoided in this way are, first, peritonitis; second, secondary infection of various portions of the peritoneal cavity or of other portions of the body, as, for instance septic endocarditis, empyema, etc. Then, too, the formation of hernia, if a late operation is made in which drainage is necessary. Again, post operative adhesions can be avoided. The patient is incapacitated for work for only a short time, and there can be no recurrence.

4. In all cases of acute appendicitis, without regard to the treatment contemplated, the administration of food and cathartics by mouth should be absolutely prohibited and large enemata should never be given.

This conclusion refers equally to whatever treatment one may choose. Whether one proposes to operate, or not, food and cathartics should never be given by mouth, because it

increases the discomfort of the patient and the dangers are greatly increased because of the tendency for dissemination of septic material by the peritalsis. This applies as well to patients that are operated as to those that are not.

5. In case of nausea or vomiting, or gaseous distension of the abdomen, gastric lavage should be employed.

The gastric lavage will remove from the alimentary canal a great amount of decomposing substance which, if placed in the stomach of a healthy person, would give rise to a very serious condition, so that there can be no doubt about that being good advice in the treatment of appendicitis, aside from this it will overcome peristalsis and pain.

6. In cases coming under treatment after the infection has extended beyond the tissues of the appendix, especially in the presence of beginning diffuse peritonitis, conclusions four and five should always be employed until the patient's condition makes operative interference safe.

It is this conclusion that my friend, Deaver, has now accepted. It is a conclusion which Dr. Mayo and a number of other of the most successful surgeons in this country accepted when I first explained the method to them. Dr. Mayo did not try the method for about a year after I spoke to him about it, but seeing cases in my hospital from time to time do well, and finding that patients did not die as they formerly did where this method was not practiced, he adopted it, and so have hundreds of others.

7. In case no operation is performed neither nourishment nor cathartics should be given by mouth until the patient has been free from pain and otherwise normal for at least four days.

That this is good practice is simply a matter of experience.

8. During the beginning of this treatment not even water should be given by mouth, the thirst being quenched by rinsing the mouth with cold water and by the use of small enemata. Later small sips of very hot water frequently repeated may be given, and still later small sips of cold water. There is danger in giving water too freely, and there is great danger in the use of large enemata.

It is possible that in one of the cases Dr. Hardon mentioned, in which a pint of normal salt solution was given every four hours as an enemata, this had something to do with the death of the patient. I have seen a number of cases in which a large enema, especially an enema of a quart or more has caused rupture of an appendiceal abscess and has killed the patient.

9. All practitioners of medicine and surgery, as well as the general public, should be impressed with the importance of prohibiting the use of cathartics and food by mouth, as well as

the use of large enemata, in cases suffering from acute appendicitis.

I believe that is proper, because in my experience in a large number of cases of appendicitis, every case of death that has occurred so far has been due very largely, if not entirely, to the use of cathartics or food. All of the patients who have died had received either cathartics or food, and a large number of them had received both after the beginning and to my knowledge there has not been a death in a case that had not received either cathartics or food.

10. It should be constantly borne in mind that even the slightest amount of liquid food of any kind given by mouth may give rise to dangerous peristalsis.

People imagine when they give a patient milk, soup, stew, or fish, or something of that kind, that they are giving practically nothing. In taking the histories of our appendicitis cases, we regularly ask the patients whether they have received any nourishment. Many of them say they have received none and still when we inquire a little further find that they drank some milk just before entering the hospital. It is dangerous to give any kind of food, milk or soup, or cathartics by mouth.

11. The most convenient form of rectal feeding consists in the use of one ounce of one of the various concentrated liquid predigested foods in the market, dissolved in three ounces of warm normal salt solution, introduced slowly through a soft catheter, inserted into the rectum a distance of two to three inches.

We have found that if food is given by the ordinary fountain syringe, it often gives rise to irritation. If milk or egg is given by enema unless it agrees with the patient, it gives rise to gaseous distention, sometimes to pain, and makes it impossible to continue the rectal feeding. For that reason this form of food, and not more than four ounces at a time, should be given through a soft catheter, and the nourishment should be permitted to enter the rectum by its own weight; that is, the catheter is attached to a funnel or glass syringe, and the food poured into it. This obviates irritation.

12. This form of treatment cannot supplant the operative treatment of acute appendicitis, but it can and should be used to reduce the mortality by changing the class of cases in which the mortality is greatest into another class in which the mortality is very small after operation.

That is an important point. Everybody knows that the mortality in appendicitis is greatest if the patient is operated between the second and the sixth or seventh days. It is that class of cases in which the mortality is reduced enormously by this method.

As regards statistics, I will say a word or two. Taking my last one-thousand cases of appendicitis operations the mortality is about 2 per cent, so that with the six-hundred cases

quoted, if the same mortality persisted, we would have to have thirty-thousand cases of appendicitis in Chicago in one year. It is preposterous to suppose we have had that number of cases of this disease out of a population of less than two-million; because if this proportion were correct one half of the entire population would suffer from this disease counting the average life at 35 years; consequently, if this treatment had been followed, the actual mortality would have been reduced very greatly.

Regarding the mortality in my cases of diffuse peritonitis, I will say that many of the cases of perforative appendicitis and diffuse peritonitis were admitted to the hospital in a dying condition. They were practically dead when they came in, and every one of these cases had previously been treated by the free use of cathartics and all of them had received some form of nourishment by mouth.

It has been my observation that the use of cathartics and food by mouth as well as the administration of large enemata are responsible for most of the deaths which occur in patients suffering from acute appendicitis.

Dr. Hardon (closing the discussion on his part): I am very much pleased to have heard Dr. Ochsner make a statement that seems so plain when it is spoken, and yet, it seems to me, so hard for practitioners to understand when they read it. He does not advise the starvation treatment for cases seen early, but operation. If they would all follow the instructions given by Dr. Ochsner here to-night, there would not be so many fatal results from the starvation treatment, because there would be no cases coming under this head if seen early. When seen early, he says operate, as do all conservative practitioners. But the point of my paper to-night was not that we should wait until that class of treatment could be instituted. There is not a city of fifteen thousand inhabitants in this country that has not a competent or available surgeon, and why should we wait and jeopardize our patients' lives? All of these cases, that Dr. Ochsner would treat by the starvation method, as used by him, should be the cases that are out in the country where no surgeon is available, as were the majority of the Mayo cases to which Dr. Ochsner referred. If a doctor sees a case and makes a diagnosis of appendicitis, he should advise that that patient be operated upon, in the beginning of the attack, and at the appropriate time, if he is going to save lives that would otherwise be lost. Of thirty-three Ochsner cases that entered the hospital with appendicitis, seven were admitted in a practically dying condition, according to Dr. Ochsner's statement, and were lost. The diagnosis was evidently made in those early cases; somebody waited, and somebody was responsible for the deaths of those patients. The practitioner who waited, waited too long. The sooner we get together on this matter, and advise our patients to submit to operation, the more lives we will save, and not only this, we will be saving them time and money and helping the world in general, so

that we shall not have the unnecessary deaths which we now have. You all know what you would do if you had an attack of appendicitis. Why not then do for your patients as you would be done by and have them operated early?

As to the death referred to in my paper, the criticism made is upon the starvation treatment, as the possibility of causing the rupture by the method used would be impossible. The method failed. Early operation would probably have given a different result.

Dr. Barrett (closing the discussion): One point that I wished to make was that we were still having a large mortality from appendicitis in Chicago. The list of deaths from this disease just about equals the number that are killed by railroad accidents; and you know there has been an enormous amount of money expended in the elevation of tracks that lives might be saved. Why is it not due the public that the medical profession save all the cases of appendicitis that they possibly can? Patients will have more confidence in submitting to an operation if they feel that the counsel given by one physician will not be reversed by the next consultant. It behooves us therefore to reason together and be of one mind upon the essentials of so important a question; the lives of about 260 persons at the best period of life being sacrificed yearly.

Another point which I wished to make was that many lives are lost by an early case being turned into a late dangerous one through the indifference or fear of the patient or friends or through the failure of the attending physician to advise wisely. One of the most common causes of this delay is found in the statement, "I have been carrying out the starvation treatment." As stated in my paper, Dr. Ochsner has made it rather plain that:

He would operate immediately upon all chronic cases.

He would operate immediately upon all acute cases seen while the infection was still confined to the appendix.

He would operate immediately upon acute cases at any time if the inflammatory process was walled off.

He would place the patient upon the starvation treatment if the infection were diffuse with resulting spreading or general peritonitis.

It is a pity that these rules have not been more definitely understood and more generally followed.

Many who presume to carry out this treatment do so as follows:

A case of appendicitis is suspected; the "starvation treatment" advised—diagnosis not important.

Later the diagnosis is confirmed; still the "starvation treatment."

Swelling in the right inguinal region; "starvation treatment."

Patient getting worse; "treatment" wavering.

Patient shows marked signs of peritonitis; "starvation treatment" abandoned and an operation advised.

This is a matter of common observation. Is the practitioner at fault? Yes and No. No, because of Dr. Ochsner's oft repeated conclusions, No. 4 reads, "This form of treatment, when instituted early, will change the most violent and dangerous form of acute perforative or gangrenous appendicitis into a comparatively mild and harmless form." He wants nothing stronger than this. Yes, because he cannot in justice let a case pass the early stage and say that he is carrying out Ochsner's treatment, for in Ochsner's hands the case would have been operated upon. If Dr. Ochsner was partly wrong, he has since made himself partly right, and no man should do him the injustice of putting an early case on this treatment and calling it Ochsner's starvation treatment.

This treatment has been confusing. I have been interested in studying the reports of some of the cases treated by this method. One case is reported as having a large circumscribed pus cavity; the "starvation treatment" was instituted that the patient might be gotten in condition for a drainage. On the fifth day the abscess wall broke, allowing the pus free access into the abdominal cavity. Now, according to the professed ideals of this treatment, was the time to keep the patient on the non-operative treatment, yet this boy in Ochsner's hands was immediately operated upon.

Dr. Ochsner's high position places him beyond a suspicion of any personal criticism in these remarks. It is the starvation treatment and the abuse of it that I refer to. This treatment employed to the exclusion of surgery is responsible for a great number of deaths, and on these grounds I take exception to it.

DOUGLAS PARK BRANCH OF THE CHICAGO MEDICAL SOCIETY.

Regular meetings are held on the second Monday evening of each month at Gads Hill Settlement; Roby and 22d St. Membership —.

Officers.

President.....J. Chase Stubbs, 971 W. 22d st
Vice-President.....J. F. Chvatal, 1593 W. 22d st
Secretary.....Clyde D. Pence, 1389 Ogden ave
Treasurer.....Wm. E. Miller, 1155 S. California ave
Councillor.....J. A. Clark, 832 W. 21st st

At a meeting held November 14, the following papers were read:

Extirpation of a Carcinoma of the Rectum Implantation of the Bowel Into Vagina. Report of a Case.

J. Chase Stubbs, M. D. The specimens I wish to show you are from a patient of Dr. J. E. Stubbs upon whom I performed a vaginal hysterectomy in February, 1904, and in March, 1904, did what is known as a Kraske.

In January, 1903, my uncle Dr. J. E. Stubbs asked me to examine a patient of his with a

view of determining the advisability of an operative procedure.

Now, ten months later I come before you to report the ultimate results of such examination. I also have with me the uterus and a microscopical section of the tumor found in the rectum.

In as few words as possible it might be well to give the patients personal history, before going on with a description of the operation as performed by me later.

Family history: Father died aged 56, with softening of brain, ill one year. Mother died at 40 from Asiatic Cholera. There were nine children. One died from measles, one from pneumonia, and one from rheumatism.

Mrs. Z., American, widow, aged 57; bore one child; has been a widow over twenty years. In 1893 had both breasts removed for malignant tumor; exact nature I am not aware of. General health good from 1893 up to about one and a half years ago when patient had an acute attack of jaundice followed by the passage of an immense number of biliary concretions the size of millet seed. During this attack she had several severe attacks of palpitation, lasting from a few hours into days. This illness wore off in due time, and from then on until August, 1903, Mrs. Z. enjoyed fair health.

Some time during the month of August she began to experience a sensation of weight in the pelvis. This gradually increased so that she was at all times conscious of a weight or fullness of the pelvis, with once in a while a sensation of pain. This distress gradually increased in severity until some time during the following month she consulted Dr. J. E. Stubbs.

At the time of my first interview I saw a lady of medium build, in good flesh, complexion slightly icteroid, and who to the casual observer would have passed as an individual who enjoyed ordinary good health.

A pelvic examination revealed a large nodular uterus, which had every appearance of fibroids. The uterus was slightly movable, the broad ligaments were apparently shortened so that it could not be displaced laterally, but it was possible to elevate the organ slightly. Any attempt beyond that of slight pressure to change its position elicited pain. To the left, behind, and a little below the body of the uterus was a hard firm mass, which at first I was inclined to take for a prolapsed ovary, but as any attempt to outline the body produced so much pain and distress I was compelled to desist from further manipulation.

At a subsequent examination the possible ovary was found to be a tumor situated in the posterior wall of the rectum, which presented a rough ulcerating surface on the interior of the gut.

The lower border of this tumor was three or three and a half inches above the anal margin, and was the size of an English walnut. Between the enlarged uterus and the tumor in rectal wall the patient was having a good deal of difficulty with bowel function. One produced the sensation of a full rectum and jointly they made a bowel movement difficult. Pain but moderate.

An operation being suggested and agreed to the patient entered the Baptist Hospital the last of January.

It was deemed expedient to deal with the uterus first, so on February 2, 1904, I performed a vaginal hysterectomy.

The size of the uterus combined with the very small size of patients vagina, made the operation a bit slow. Also I found it advisable to split into the body of the uterus after having secured the ligaments and contained vessels on the right side.

The right broad ligament I found much thicker than usual. The left broad ligament was just the reverse of the right, being thin and friable. That, owing to a tendency to bleed was clamped and the clamp allowed to remain the usual forty-eight hours.

After splitting into the uterus on the right side and shelling out a large intra mural fibroid the delivery of the uterus was effected without more ado, there being no adhesions to complicate matters.

The uterus being out of the way we were able to outline perfectly our rectal tumor, and demonstrate its apparent freedom of adhesions with surrounding tissue. The patient having been anaesthetized for about an hour and a half and her condition tending to shock, all further manipulation was discontinued and patient was returned to bed.

If you will except several attacks of palpitation of long and short duration, recovery was uneventful. At the end of four weeks patient was allowed to return home. She rapidly regained strength, color and weight so that on the 18th of March she again entered the hospital in order that we might complete our work.

March 21, 1904, I decided to resect or amputate the bowel. The patient being anesthetized she was turned upon the left side. I made a straight median incision from a point corresponding with the third sacral eminence down to the margin of the sphincter ani, the sphincter having been previously paralyzed by stretching and the bowel loosely packed with gauze.

Carrying my incision down to the bone I next freed it of all ligamentous and fibrous attachments from the tip of the coccyx up to a point a little below the fourth sacral foramen. By severing the bone below this point you do not jeopardize the various nerves which supply the bladder. The middle and superior haemorrhoidal arteries lie close to the sacrum and are at times difficult to ligate in consequence.

Next step chisel through the bone and remove same. We now have to deal with soft structure only. Rapidly dissecting downwards we soon have the gut exposed throughout four or five inches of its length. Retractors enlarge the field of operation.

By blunt dissection, keeping close to bowel, I followed towards the left and behind the gut and soon had it free of all attachments. Haemorrhage was at times annoying and troublesome but never alarming and was controlled by hot compresses or ligature as we progressed. You can well imagine that the oozing was free and plentiful from this large surface. The gut being

freed above and below the tumor the lateral spaces being protected by gauze packing, the strip in bowel was now removed. The bowel, clamped at a safe distance above the tumor, was severed transversely below the clamp. Next the gut was again cut across transversely below the tumor.

As the severed ends of the gut could not be approximated the gut was loosened high up, even going up behind the peritoneal fold, and still there remained a gap of three inches.

I now determined to bring the gut into the vagina. According one assistant having introduced the finger into the vagina an opening through the vault of same was now effected. This being properly enlarged it readily permitted the gut to be invaginated into the vagina. The upper end of the gut still remaining in the grasp of the forcep, we introduced four loops of silk through the lateral walls of the gut, carried this through the vagina upon a pair of forceps. These now furnished me a means of making traction. Releasing the forcep the gut was drawn into the vagina an inch and a half. Next I stitched the muscular coats of gut to corresponding coats of vagina. Use silk loops to relieve the anastomosis sutures of all strain by carrying them out of the vagina and around a long forcep placed transverse to same.

We now completed our operation by cutting off the stump of gut about three-fourths of an inch above anal margin.

Packed the very large wound cavity with iodoform gauze, and it took a liberal quantity, passing the ends out through the anal opening. We now closed the wound with silk worm gut interrupted sutures, the anal opening making the point of drainage.

This operative procedure had consumed an hour and fifteen minutes all told. Patient was now put to bed.

It a short time the patient had passed flatus through the vagina. At the end of forty-eight hours I removed the silk loops. Seventy-two hours after operation patient had had a slight bowel movement.

Ten days after the operation the line of incision had united perfectly and stitches were removed. Began removing gauze packing through anal opening at end of five or six days. After all was removed replaced with two or three small strips which were changed as required. The large cavity or hollow space required several weeks time to granulate in.

Convalescence was slow. Palpitation and irritable stomach gave us the most concern after the first three or four days.

At the present writing patient has fully recovered her strength, eats, sleeps and enjoys life. Says she has not felt so well in years. Defecation takes place through the vagina. After each morning bowel movement patient flushes the vagina and inserts a small cotton tampon and is comfortable for the next twenty-four hours.

Operative interference with malignant or other growths of the upper and middle portions of the rectum are of comparatively recent date. In 1874 Kocher, of Berne, published a method which he called his "long posterior

incision," which included excision of the coccyx, exposure and enucleation of the diseased rectum, with free opening into the peritoneal cavity when found necessary.

In 1892 Arnd, his assistant, published seventeen cases operated upon by the "long posterior incision" in Kocher's clinic, twelve of whom recovered from the operations. After a period of from four to sixteen years, nine remained well or free from recurrence of disease. In 1885 Kraske demonstrated that the scope or field of operation upon the upper portion of the rectum could be very materially increased by resecting the sacrum up to the level of the third sacral foramen, that this could be accomplished without producing any serious disability or injuring any important structures.

In the operation of Kraske, after the soft parts had been divided in the medium line by a vertical incision extending from the second sacral spine to the anus, the coccyx and left lower half of the sacrum were denuded, the coccyx was excised, the sacro sciatic ligaments were divided and the left margin of the sacrum was chiseled off on a line beginning at the level of the third sacral foramen, extending in a curve, concaved to the left, running along the lower border of the third sacral foramen through or beyond the fourth foramen to the left lower corner.

Mortality. Kronlein collected 881 cases from eleven German clinics, the operative mortality of which was 19.4%. This mortality list was classified as follows: Fifty percent due to infection, twenty percent heart weakness and collapse, thirteen percent to affection of lungs and fifteen percent to various other causes.

The mortality varies with different operators, thus Kocher out of seventeen cases operated upon by the "long posterior incision" lost five. Czerny, out of thirty-four cases, lost seven, that is thirty and twenty percent, respectively.

Permanent results must depend largely upon the absence of metastases, freedom from glandular involvements and thoroughness with which the work is done. In other words, the same conditions prevail and must apply as governs the removal of malignant growths from other portions of the body.

971 West 22d Street.

When is the Proper Time to Make Your Collections.

W. E. Miller, M. D. This very important subject which has been assigned for discussion tonight merits our most careful consideration. It is one in which we all take an interest, and one which should receive more of our thought than we usually devote to it. It is only when we learn from experience that we really profit or in other words, when we are thrown on our own resources, we remember how we get out of difficulties better than when some other person helped us out of them I am speaking as a general practitioner and have only commonplace talk just as I would do in a private conversation with any of my friends.

1st. I will give you a few pointers in law to

acquaint you with what is necessary in order to be able to collect your accounts.

2d. How to keep your books or cards so you can collect by law, if necessary.

3d. When is the proper time to make your collections and how I go about it to collect mine.

1st. An open account outlaws in five years—a note in 10 years from maturity. Days of grace are abolished in this state. The legal rate of interest is 5% per annum, but any rate not exceeding 7% may be named by contract. All claims against the estate of a deceased person must be filed within two years after the estate is probated and after filing, must be set for hearing and tried. The husband and wife are both liable for physicians' bills. If the husband goes through bankruptcy, the wife is not relieved from responsibility from such debts.

A judgment of a court of record is in force seven years and may be revived within 20 years from date of judgment. A judgment of a justice of the peace is in force seven years and may be revived at any time within three years thereafter. The head of a family is entitled to a homestead exemption in realty owned and occupied by him to the value of \$1,000 and also \$400.00 worth of personal property, and \$15.00 per week salary. Any person not the head of a family has an exemption of \$100.00 worth of personal property, but no homestead exemption or exemption of wages.

The limit of jurisdiction of a justice of the peace is \$200.00. If suit for a larger amount is necessary, it must be begun in the higher courts. In order that a judgment obtained before a justice of the peace shall become a lien upon debtors' real estate, it is necessary that a transcript of it should be filed in the Circuit Court and execution issued within one year. When a check marked "in full" is sent on a disputed account, and it is accepted by the creditor, it is a full settlement of the account, although the check is for less than the amount of the claim. The promise to pay the debt of another must be in writing to be enforceable by law.

It is of great value to have the first name of both husband and wife, the residence and business address and occupation.

To keep accounts and collect them is the commercial side of medicine and should be added to the curriculum of our medical schools. Very few medical men have a thorough business education and probably some cannot keep a double entry ledger system. We have books adapted to our business and there are card systems. Both are good, if kept properly, but most of us are too careless or indifferent, at any rate, in the beginning of our practice to start that part of our business properly.

When I started in practice, I kept a visiting list, ledger and cash-book. I keep the same system now. There are several disadvantages in the visiting list when we must prove our claim in court, that are obviated in the card system. In the card system, you need to show only the one account, when in the visiting list, it happens you must show several pages of other accounts with the one in question. It is necessary often to show what your services

consisted of and this should always be written out as fully as consistent under remarks, on your card, or visiting list. For instance a fracture should be designated, what bone and if compound. Confinement, if instrumental or version; prolapsed cord or other complications should be mentioned.

You may think you will remember such things, but unless you keep a separate case record, it will be hard to remember 5, 10 or 15 years. Keep your work posted right up to date. I used to often let mine run for three to six months and get mixed up on small accounts.

When is the proper time to make your collections will now occupy a little of your time and patience.

If you make an emergency call or any ordinary call on a patient, not regularly employing you, ask for your fee at the first visit. Especially, if you do not expect to make any more calls, or if you suspect that the people are not of sterling quality. If you do not, the chances are you will be obliged to put in time writing and sending bills, or sending collectors, or you will make a number of visits, get discharged, and then have the same course to pursue. I think when we ask for our fee the first visit and tell the people what we expect, there is less difficulty in collecting. Then again, we are very often called to a case where other physicians have attended, and for some reason a change is made, but the retired one is not paid. Very few physicians will ask "has the doctor been paid, if not why," and put in a good word for him, and see that he is paid. We can help each other very materially that way. You can soon find out the dead beat if you are on your guard.

Lately, a prominent West side physician, about a mile from my office, on inviting him to drop in and see me when he got in my neighborhood, said "I don't get over there very often, when I did any work over there, I did not get paid for it." Now I think my neighborhood is good pay. But you see the point? When people go out of their neighborhood for a physician, they need watching. Find out why and all about it first time, and you will not get beat so often.

Some never pay until a bill is rendered, others feel highly insulted if they get a bill. Many times have some of my patients come to me and said "that's the first time I ever got a bill! Why Dr. So and So always attended us and he never sent us a bill."

I think the proper time to send a bill is not later than the first of the month following services, and when it is a tedious case, lasting several months and nothing has been said about paying, a statement on the first will wake them up and you can soon find out if you are going to get your fee or not. You should improve the opportunity to inform them you expect a payment and insist on payment being made as often as consistent. It is just as necessary as to give your services. I did not adhere to this rule myself in the past as I will in the future, but I was always watching my accounts and did not let many of them outlaw.

Lately, I went over my books to see what ac-

counts I had collected, and the average for 17 years was 90%, which is very gratifying to myself, but this other 10% belongs to me and I need it so I shall not relax my vigil. But to get at collecting again. Sending bills is not collecting. Some laugh up their sleeves, others in your face when you send them bills, and the best way to get your money from such is to follow them right up by having a good collector.

If we would ask for our fee at the first visit, we would have less need of collectors. We should do more cash transactions, then we would have more money and less worry. But there will always be need of collectors and it behooves us to employ such as we know will do the square thing. I have had a number of private collectors, with poor results. For a number of years I employed C. F. Meyer & Co. They have done more honest collecting for me than any private collector ever did. It is my custom to send a bill to Meyer & Co. if I suspect the people will not pay me or if after sending a bill the second time I get no response, I mark them according to their key, A, B, C, or D, which indicates how they should handle the account. They can handle gently and if that method fails, they can employ more severe measures, and are usually successful.

Do not have the mistaken idea that if you present a bill by mail or collector that you will lose your patient. You are in more danger of losing them if you let your bills run on indefinitely, for if a patient owes you a bill and has not seen you about it, the chances are that he will send for another doctor, when they again need one. We all have different views and ideas on collections, and I do not suppose you will all agree with me, but I have found from 17 years actual experience that the methods outlined are the ones that brought me the best results. The man that pays is your friend; the man who don't, is not.

1145 S. California Ave.

WEST SIDE BRANCH.

Officers.

President.....John A. Robison, 237 Ashland Boul.
Secretary.....J. J. Alderson, 264 S. Halsted st
Delegate to Council.....A. I. Bouffleur, 100 State st

The regular monthly meeting of the West Side Branch of the Chicago Medical Society, was held at the Cook County Hospital, Thursday evening, November 17, 1904, at 8:30 p. m. the president, Dr. John A. Robison, in the chair.

Minutes of previous meeting read and adopted.

Dr. T. R. Crowder continued the subject of the last meeting, a Symposium on Haematology, by a paper on the **Technique of Blood Examination**, describing concisely methods of estimating hemoglobin, counting red and white corpuscles and methods of staining blood.

Dr. Theodore Ticken followed on the topic, **Pernicious Anaemia** and exhibited a case of the disease in a married woman, 42 years old, who came under his care in June, 1904, presenting a complete clinical picture of the disease and all the characteristic blood findings. The pa-

tient under administrations of arsenious acid, gr. 1-15 t.i.d., with tartrate of iron, nux vomica, belladonna and laxatives, has increased in weight from 115 to 170 pounds. The best of food and proper hygiene has been insisted on. There are now none of the symptoms of the disease present. The woman presents the appearance of robust health.

The doctor gave an interesting talk on the disease, going over the subject thoroughly and did not consider the patient as cured even with the excellent showing made under treatment, but looked for a relapse in the course of time.

Blood specimens of the case were exhibited by microscope.

Questions regarding the patient were asked of Dr. Ticken by Drs. H. G. Graham, G. W. Newton and Alderson.

After the scientific program a pleasant smoker was held and a feeling of good fellowship prevailed.

CHICAGO LARYNGOLOGICAL AND CLIMATOLOGICAL ASSOCIATION.

A regular meeting was held October 4, 1904, and, in the absence of the President, Dr. John Edwin Rhodes, Dr. William E. Casselberry was elected chairman.

Extra-Dural Abscess Following Empyema of Both Frontal Sinuses.

Dr. George Morgenthau: I desire to present this patient before his toilette is complete, in order to receive any suggestions for improving the cosmetic appearance.

This boy was brought to the Michael Reese Hospital on the 28th of July, with a temperature of 103°, pulse of 60, in a stupor. He had been unable to sleep the whole week before. His trouble, I was informed, began with a severe pain in the eye, followed by swelling of the eyes and forehead. The first physician called in made a diagnosis of erysipelas. Later a diagnosis of frontal sinus empyema was made, I operated according to the Kuhnt method, as I found it impossible to do the Killian operation, enlarged the duct, and put in a quarter of an inch drainage tube. He did very well for about eleven days, although his pulse was slow. He was quite intractable, and on the evening of the twelfth of August he was taken with convulsions, which occurred with such frequency that it was necessary to give chloroform several times. I made a lumbar puncture, and removed two ounces of clear fluid, which were free from bacteria. He slept very well during the night. The next morning I operated, removing the posterior wall of the frontal sinus on the right side, and found pus under great tension. I removed about two ounces of pus. The dura was infiltrated. I introduced a needle, in the right brain, but did not secure any pus. He recuperated very rapidly. We found the stitches we inserted would not hold. I have thought of putting a bone flap on the right side to protect the dura which is exposed there, and of injecting para-

fin in the center. The boy's health is good; healing is taking place rapidly.

I should feel obliged to any of the members for suggestions regarding the further treatment of this case.

DESTRUCTION OF THE BONY AND CARTILAGINOUS SEPTUM BY SYPHILIS.

Dr. Joseph C. Beck: I desire to show you two cases before I operate on them. I expect to show both of them again and the results.

The first case is one of acquired syphilis of the violent tertiary form, the disease having destroyed the entire bony as well as cartilaginous septum, so that there is not a vestige of septum left, with involvement of the floor of the nose, or roof of the mouth, resulting in a large perforation of hard palate and destruction of the uvula. The destructive process also involved the anterior part of the external nose, so that a cicatricial mass holds the alae in one mass in the center. The constitutional treatment was carried out with the very best results, so that after operation the wounds healed very rapidly. I have operated on this patient a number of times and have obtained this unsatisfactory result preliminary to another operation I shall soon undertake. I loosened up the alae, resected a mass of scar tissue above, here (indicating) and got union. I constructed an artificial septum of hard rubber. The floor of the nose has been destroyed, so that the woman has got no resting place for bony septum and paraffin injections would be out of place in this case. This large perforation which you see through the hard palate will hold the future artificial septum and hold up the nose I expect to make. I am going to do the Italian operation of obtaining a large flap from the arm and sew it into the anterior part of the nose.

If you wish to examine the case you can see the anatomical conditions in the nose, the sinuses, and particularly the opening of the sphenoidal sinus, which can be seen very plainly in the absence of the nasal septum.

Angioma Involving the Soft Palate.

The next case is one of angioma involving the soft palate and cheek. I have treated this angioma by various methods, but not succeeding, I propose to do a radical operation on the cheek and that portion involving the soft palate. I resorted to electropuncture and injection of very hot water into the mass, with not very good result, this being the latest treatment that has been advocated in this class of cases. (Wyaht). I am going to do ligation in series very shortly, after which I will exhibit the case again.

Dr. Charles M. Robinson then read a paper entitled:

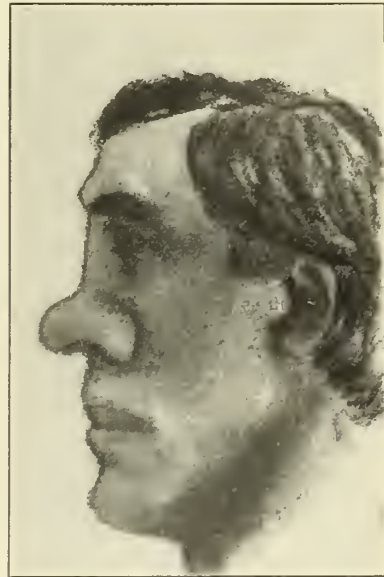
Observations on the Different Forms of Operations for the Correction of Septum Deformities.

Charles M. Robertson, M. D. We all recognize that no one operation will suffice for all the various types and conditions of deflected septi. One has but to review in his mind cases

treated to prove the fact as borne out by our experience as operators. To discuss any one particular operation would exclude a large proportion of cases as they occur in our practice.

In dividing operable cases into groups, we might make a sweeping classification and sum them into four types: First, those which are termed, or might so be considered, deviations of slight degree. Of these a great majority may be treated by the removal of the excess of mucous membrane, cartilage or bone at the apex of curvature. In a large per cent of cases this removal will enable us to gain enough breathing space or do away with the mechanical irritation produced by the presence of the deflection.

Second, those cases where the removal of the



CASE I BEFORE.

apex of deflection will not suffice. These are septi which are deflected at an angle or evenly bowed to the one side, being simply a septum too large for the situation it was designed to fill. In this class of cases some operation, such as the removal of V-shaped sections or a flap operation, such as is advocated by Gleason, would suffice to render the nostrils patulous.

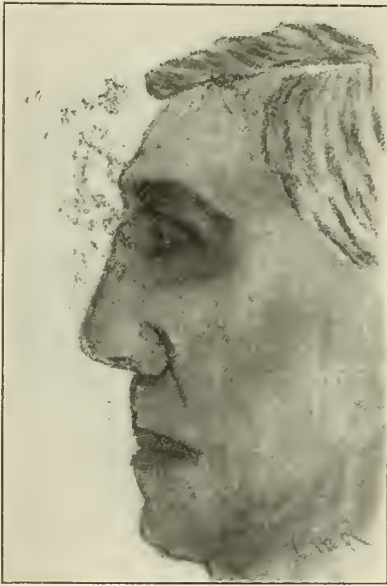
The third class are those which present irregular masses, deviation to a marked degree, and probably deep grooves or clefts on the side of concavity. Here it would be advisable to do a window resection of one of the different methods, as will be mentioned in the next paper.

The fourth class, and the one I wish especially to consider, is where from external and violent injury the nasal bones are dislocated or fractured, and the septum has been wrinkled or broken, causing obstruction by deflection to one or both sides. In this class of cases an external operation is advised. Several cases of

this type have come to my notice, and I herewith take the liberty of presenting to you two which seem most typical.

Case I. Mr. C., age 35; was kicked in the face by a horse, causing a fracture and dislocation of the nasal bones and a fracture of the articulation of the cartilagenous and bony septum, with a wrinkling of the cartilage, thus producing stenosis of both nostrils. The accompanying photograph will give you an excellent idea of the external appearance of the nose at the time of operation.

Under anaesthesia, an incision was made from the naso-frontal suture to one centimeter of the tip of the nose. The skin was carefully loosened, and then the soft tissues were pushed



CASE I—AFTER.

to one side for a distance of one centimeter. After exposing the nasal bones, the nasal processes of the superior maxillae and the alar cartilages, the nose was entered from the lower edge of the nasal bones as far as the bottom of the lower point of incision. Then, with scissors, the cartilaginous septum was separated from the bony septum as far down as the scissors could reach. Then the edges of the nasal bones were loosened, and the bones raised into place. This required considerable force, and a fracture at the base was necessary. Then a strong wire suture was passed through the cartilaginous septum as deep down as possible, and the septum wired up to the spine of the frontal bone, the suture passing through the bony septum also. This suture was buried. The interior of the nose was now packed to hold the nasal bones in place, and the soft tissue on the side of the nose as far as possible was loosened and slid up on to its dorsum to fill in the sunken part. This tissue was held by catgut

sutures, after which the skin was brought together by silk and the wound sealed with collodium.

The accompanying photograph gives a good illustration of the result obtained, the only scar visible being a very light line along the dorsum of the nose, which soon faded, making it almost impossible to tell an operation had been done. The nostril became patulous, and the wire suture soon covered over with mucous membrane, although high up it, of course, passes through the nose from side to side, but which causes no symptoms whatsoever.

Case II. J. F. B., aet. 24; was struck on the nose while playing ball, causing considerable deformity, as shown in the drawing. In this case the alar cartilages were separated and the cartilaginous septum wrinkled, so that breathing through the nostrils was impossible. The operation was performed by making the in-



CASE II—BEFORE.

cision from the tip of the nose to a point about midway from the free edge of the nasal bones to their articulation with the frontal. The soft tissues separated as in the former case and the incision of the triangular cartilage, done as in Case I. In this case the septum was sutured with the wire placed deep down into the cartilaginous septum, and the suture passed through the nasal bones and septum at about the middle of the nasal bone surface. Then the alar cartilages were brought together at the dorsum of the nose, and were sutured with the septum, using catgut. The soft tissue and the skin were then sutured with silk and the result was as perfect as Case I.

In Case II the depression on the dorsum of the nose was almost gone by simply straightening up the septum, and it was not necessary to slide tissue in from the sides of the nose. In both cases was the lumen of the nostril replaced, as well as the deformity obliterated.

In conclusion, some points I have observed with regard to the different forms of operative procedure:

1. The sawing off of a ledge or spur will

often give more room than would appear possible at the pre-operative examination.

2. Great care in saving mucous membrane in these cases is not so important as is usually believed, as it is usually hypertrophied and therefore a diseased tissue.

3. The precaution of avoiding a perforation, which I have seen less than a dozen times in my operative life.

4. The impracticability of V-shaped operations, as made by files and knives on small deviations, the consequent packing into place till the septum has regained its rigidity.

5. The utter failure of all crushing operations, as they are brutal and unsurgical, aside



CASE 11—AFTER.

from being impractical, from the fact that it is impossible to make the circumference of an arc fit into a space the length of a segment of same.

6. The ease and success of the Gleason method in most cases where there is no external deformity. The advantages in the short time that packing is necessary.

7. The absence of firm cartilaginous support in the window resection operation, and the liability of one or more perforations occurring during operation or healing.

8. The importance of saving all tissue possible that has function, and is not diseased.

9. The total disregard of so many surgeons to this class of nasal stenosis, and the great benefits accruing from such operations on special functions, and the general health of the individual.

100 State Street.

Dr. A. M. Corwin then followed with a paper entitled:

A Simple Method of Correcting Deflected Nasal Septa by Window Resection (Modified Krieg Operation).

A. M. Corwin, M. D. That unusual progress has been recently made in the perfection of intra nasal surgery is not surprising in the light of those two splendid discoveries, cocaine and adrenaline. It would seem wonderful enough

that the field of operation has been thoroughly quickly, lasting and safely put to sleep by the local application of so simple a vegetable drug while the higher centers remain wide awake. But it is strange indeed, if not uncanny, to apply a solution of extracted principles of certain animal tissues to the mucous membrane and behold it is blanched and bloodless within a few seconds so that soft tissues and underlying bone and cartilage may be cut, sawed and chiseled into without haemorrhage.

The absence of pain and absence of bleeding, and the consequent intelligent cooperation of the patient with the surgeon have left the operator no excuse for working in the dark or in a haphazard and bungling fashion. No one with even a fair amount of experience in seeking to overcome septal deflection can review his own experience and its literature without an appreciation of the serious difficulties that this deformity has presented to the surgeon. Eloquent testimony to those difficulties is recorded in the myriad operations that have been recommended for its correction. The very greatness of their number is strong evidence of the inadequacy of most of them. The offending deviations hacked, drilled and incised in all directions; punished by snare, trephine and punch; coerced by forceps and clamp; crowded by plugs and tubes and tortured by pins have too often stubbornly maintained their crooked character and seemingly gloried in their bad reputation.

It is perhaps trite to say that any procedure that seeks to crowd the parts into place without breaking bone and destroying the resiliency of cartilage, must fail. And furthermore, all operations which seek to make the septum straight without removal of cartilage or bone, simply cutting through the septum and forcing it into line with overflapping fragments, while often giving good results are too often unsatisfactory and uncertain. The same may be said of the methods of Gleason and Watson successful in one case with broadly built nares, disappointing in those of slender mould.

The object of this brief discussion is however, not historical nor yet to attack specifically any particular line of procedure, further than to remind us that operations involving the principals above mentioned are not universally applicable to all cases and therefore there is a long felt want for some simple, easy method involving the use of few instruments, the employment of local anaesthesia and the advent of rapid repair without the use of tubes or more than temporary packing and without the necessity of secondary operation as a usual thing. Such an operation is certainly to be found in the so-called "Window Resection" of the septum, as first definitely suggested in 1886 by Krieg and later by Boenninghaus, though dimly foreshadowed by Chassaignac in 1851 and Huyler somewhat later and by Ingal's in the early 80's in his partial resection; and as especially reported in the very excellent monographs of Freer, 1902 and 1903. Dr. Freer merits the thanks of the profession for his independent work and for persistently preaching this doctrine of resection. It is to emphasize the good

points of his papers and to present certain modifications by way of simplifying the operation that this presentation is made, for it is my firm belief from the result of personal experience and from the testimony offered by others that the operation of the near future for deflection will aim in the simplest way possible to straighten the septum by removing what bone and cartilage is necessary to this end without perforating the mucous membrane of the concave side and without sacrificing that upon the obstructed side. If this is the method of election, the sooner the profession is familiar with the technique, the better.

Instruments.

1. A sharp small bladed bistoury or tenotomy knife answers nicely. The Ingals' submucous cartilage knife is very useful as are Freer's sharp pointed cartilage knives.
2. A small long handled periosteum or mucous membrane elevator, preferably like that of Ingals' the shaft of which being strong but malleable can be slightly bent as needed in reaching behind ridges and following the posterior curvature of the deviation. The dental spatulae mentioned by Freer are also excellent instruments for this purpose.
3. A thin narrow aluminum spatula a quarter to half an inch wide. (Easily made out of sheet aluminum.)
4. A thin bladed nasal saw. Sajous' answers well.
5. It is well to have at hand also a pair of bone cutting forceps.

Preparation of Patient.

Both sides of the septum are anaesthetized with a 4% solution of cocaine especially the mucous membrane of the convex surface. It is applied by swabs of cotton on albumin applicators. The applications are made several times at intervals of half a minute with special care in reaching far back on the obstructed side and around and beneath the deflection. From 3 to 5 minutes suffices to put the parts to sleep. It is usually well to inject a few drops of a 4% solution of cocaine hypodermically in one or two places along the muco-cutaneous border of the objective nostril. Both nares are then sprayed and swabbed with a solution of adrenaline 1-1000 and cotton saturated with the same solution is packed into the obstructed naris as far as thin pledgets can be introduced above, behind and beneath the projecting deflection. It is also sprayed into the posterior choana upon that side. At the end of a few minutes the field is rendered practically bloodless and remains thoroughly anaesthetized for an hour, though half or two-thirds of that time is commonly sufficient for the operation. It would appear that the systemic action of cocaine is somewhat counteracted by the absorption of adrenaline, for in my experience patients have exhibited its unpleasant affects less frequently since the employment of the other drug. Nevertheless in nervous patients, notably women, or those not robust, the administration of strychnine grs. 1-40th to 1-20th and half an ounce of whiskey a short time preceding co-

cainization is often of advantage in fortifying the patient. Syncope which occasionally occurs during or just before the operation has seemed more often due to psychic influence of the operation than to the depressant action of cocaine as somewhat indicated by the fact that since the use of adrenaline has largely eliminated haemorrhage, these symptoms are less frequent, though the stimulant action of the adrenalin upon the heart may in part account for this as noted. Given then a marked deviation of the septum to the right and practically closing that nostril. Whether it involves the cartilage alone or the vomer also, whether a simple bowed deflection or angular, and with or without more or less spur along its line of greatest departure. The principles involved in its correction, are the same in any case. The accompanying diagrams represent this deformity by front and lateral views.

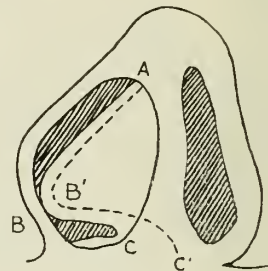


FIGURE I.

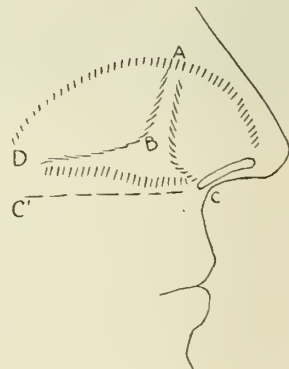


FIGURE II.

Technique of Operation.

The nostril is dilated by an ordinary bivalve speculum and under proper illumination. Incision is made through the mucous membrane and perichondrium only, as shown in Fig. III, by the lines A, B, along the vertical ridge; B, C, E, horizontally along the base of the anterior face of the deflection and E, F, in front. This irregularly quadrilateral flap is then separated by knife and elevator and when free is folded up out of the way, and held above the line A, F, by a pledget of cotton leaving a clear field below without the aid of retractors or other in-

struments for holding it aside. This is one advantage of a U-shaped incision, though it is commended also for the large free area which it leaves for further manipulation.

The next step is to cut through the triangular cartilage, practically following the lines of initial incision through the mucous membrane and without cutting the mucous membrane and perichondrium of the other side of the septum. This requires care, but is not difficult to do with the ordinary knife. There is less liability of perforating the distal mucous membrane if the incision is made obliquely through the thickness of the cartilage. The cartilage knife of Ingals is a convenient instrument especially for making the fourth incision A, F, obliquely above. It requires but a few minutes to raise the island of cartilage A, B, E, F, from the underlying mucous membrane and perichondrium by knife and elevator and remove it. Now separate the mucous membrane from both sides of the septum by passing the elevator beneath the "window;" and along the line A, B, where the periosteal elevator requires to be bent at an angle in order to hug the bone and cartilage behind the ridges A, B, and B, C, of the convex side and along the concavity B, D. This may be performed in a few minutes. The mucous membrane usually adheres most closely in angular deviations to the extreme ridge of the convex side and along the corresponding line of the concave. The separation on both sides of the septum should surely be carried back to the posterior limits of deviation. When this has been done, a little cotton can be loosely packed between the septum and the loosened mucous membrane of the concave side through the now open window. This will effectually prevent injury to this membrane during removal of the aberrant bone and cartilage. It is not likely to be harmed however even without the introduction of the cotton, as it hangs free. After trying chisels, trephines and cutting forceps, the writer has convinced himself that the offending cartilage and bone in most cases can be more neatly and quickly removed and with less shock to the patient by a saw which should be introduced below the ridge B, C, of the convex side under the loosened membrane. A cut is made horizontally toward the left through the bony base of the septum which is wont to be prominent at this point. The saw is gradually turned upward and the cut made along the dotted line C, D, and D, A, Fig. III. very much as in doing a Gleason operation. It is often convenient before completing this cut to reintroduce the saw above at A, and cut downward to meet the former incision. If a spur exists posteriorly, these saw cuts must simply be extended far enough backward to compass it at its base, removing it together with the deflected parts in front. There is then an irregular double angular fragment of bone and cartilage. A, D, C, E, B, which has been freed by the saw and may be readily extracted with forceps. Should the mucous membrane adhere to it posteriorly this can be quickly separated by the further use of elevator or knife. Nothing now remains but to examine the parts critically with probe, replace the flaps, trim them

up if they seem too redundant, remove the cotton and holding them in place with the aluminum spatula, pack the nostril with a narrow strip of surgeon's lint or gauze previously prepared, aseptized and soaked with compound tincture of Benzoin or a saturated solution of iodoform in ether. The packing should be firm posteriorly and above and relatively loose opposite the opening in the septum A, B, C, E, F, which remains covered by a double layer of mucous membrane only, so that when the spatula is withdrawn there shall not be undue pressure here. Slight bulging into the opposite naris usually occurs which indeed should be slight. This readily disappears subsequently. The packing should also be wedged into the nostril with comfortable firmness. There is seldom need of packing the other naris and it should

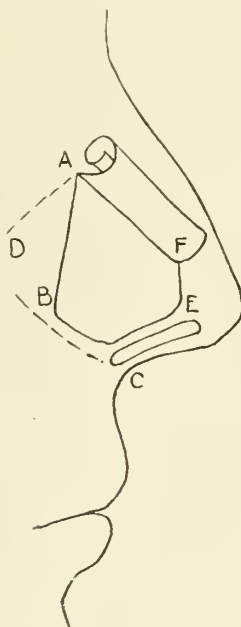


FIGURE III.

be very light in any case lest pressure cause sloughing of the membranous septum. The major part of the dressing is usually left in place for a week and only removed little by little after the fifth day. It should come away without causing pain or haemorrhage. Aside from trivial mucous oozing, there is to be expected sympathetic stuffiness of the other nostril for a day or two and slight headache; the latter is relieved by a few doses of phenacetine or applications of ice. The former is combated by a powder of 2% cocaine in sugar of milk to be insufflated by the patient a couple of times a day followed by a spray of menthol grs. 1, Eucalyptol minims 10, Caryophylli (Merck), minims 2 to the ounce of Albolene. Recently the addition of the P. D. & Co.'s adrenalin inhalant, a heavy oily preparation, half a drachm to the ounce of the above is found very useful in keeping down undue inflammatory reaction. If this be used,

Olive Oil is a better vehicle than abolene as the adrenalin inhalant will not permanently mix with the latter. However, moderate reaction is normally demanded in the repair and is therefore not to be too strongly combated. When the packing is removed there should never be any call for the use of a tube to keep the parts in place and this point alone must place this line of treatment in our estimation far above all other measures which require long wearing of plugs or tubes. There is also far less danger of secondary haemorrhage than in those operations that cut through both layers of membrane injuring two sets of vessels instead of one. The likelihood of permanent perforation is less for the same reason.

In so far we have substantially described the principals of the Kreig operation though with important details of technique, not systematically followed by other operators. I have dwelt upon the foregoing technique with some particularity because it differs from Dr. Freer's along lines that to me have proved more simple and rapid than the procedure which he recommends and with given results it is for quickness and simplicity that the profession is looking; and, because I wish to raise my voice in praise of "window resection" as the ideal method of accomplishing the desired results.

There are however, two other variations in method which I have found useful in certain cases. In certain patients where the surface A. B. C. is nearly a plain one without much bulge, it may seem desirable to retain its cartilage as a part of the newly allined septum and I have accomplished this in each of two cases to demonstrate its feasibility. In the one case the mucous membrane flap A. B. E. F. was raised as usual and the cuts A. B., B. E., E. F. and F. A. through the cartilage isolated this area which was left attached to the mucous membrane of the other side, the cut A. F. and F. E. allowing it to assume a normal vertical position. The rest of the operation was completed as before described. In one of the two cases in which this was done a small portion of cartilage was pared from its center which seemed to bulge slightly; this was done easily before the island was freed and reduced it to a plain surface. In two other cases in which the cartilaginous surface A. B. E. F. was a plain surface, the mucous membrane A. E. F. was simply incised as usual and the resiliency of the base of this deflected cartilage was effectively removed by a subcutaneous cut made with the Ingals cartilage knife introduced at F. and passed obliquely upward along the line F. A. beneath the mucous membrane. When the fragment A. D. C. E. B. was extracted, the island of cartilage assumed the vertical position with perfect results. Where cartilage can be saved in selected cases, it would seem wise to save it in order to preserve a more substantial septum and the above procedures I have found eminently satisfactory.

For the first few days following the operation, I have occasionally noticed an exudate or false membrane on the mucous membrane of the concave side probably because of the slight injury which it sustained in the process of sep-

aration, but though this exudate added to the stuffiness of that naris it cleared up within a couple of days after its appearance when not interfered with. It is usually necessary to reduce the redundancy of the inferior turbinate of the concave side, and this I prefer to do by an efficient cauterization a couple of weeks before operating upon the septum in order that the naris shall be as free as possible while the other is plugged following the resection.

Results in seventeen cases to date October 6, 1904, in which I have performed "window resection," six by the Freer method, the others as set forth in this paper, have convinced me of the superiority to all other operations for the correction of the deformity in question.

These two papers were discussed jointly, the discussion being opened by Dr. Otto T. Freer.

Dr. Casselberry, in introducing Dr. Freer, said: When I read this program first, several days ago, and saw this window resection operation designated as the Kreig operation, the thought went through my mind that surely "a prophet is without honor in his own country." I mean no disparagement to Dr. Kreig in saying this, who was the originator of it. But we have with us this evening a gentlemen who has done more to popularize this operation and to convince us of its feasibility than Kreig did in his original writings. I refer to Dr. Otto T. Freer, whom I shall ask to open this discussion.

Dr. Otto T. Freer: I wish to thank Dr. Casselberry for his kind remarks and encouraging praise.

Considering first the paper read by Dr. Robertson, I do not agree with him that no one operation suffices for all deflections of the nasal septum, for there is one procedure by whose aid it is possible to completely remove all deflections, no matter what their nature or extent, and that is the window resection, for the surgeon who commands its technique has no need of any other. It is based on the mechanically correct principle of extirpation of the bent portions of the bone and cartilage as opposed to the cruder and uncertain method of their infraction which belongs to the other operations in vogue. I do not mean by this that a Gleason or an Asch operation will not straighten a certain number of suitable deflections, but these procedures possess the uncertainty of fracture common to all fracturing methods, an uncertainty intensified by the fact that no one can accurately judge how much of bony deviation lies behind the vertical angle of the deflection; for the Asch operation is admittedly designed only for cartilaginous deflections while in the Gleason method not only are all the angles, thickenings and irregularities of the deviation forced over with it to remain as a nasal obstruction, but in bony deviations reaching nearly to the posterior border of the vomer, as I have found that many do, the part of the deflection situated farthest back is liable not to be included in the U shaped flap and is likely to be left behind to continue to occlude the nostril. These deep seated bony deviations may often be seen by posterior rhinoscopy.

To the window resection all cases are suit-

able for it is continued until all obstructing bone and cartilage are removed, no matter how extensive or how far back in the naris the deflection. In addition it has a merit no other operation has: at the site of the deflection removed the thickness of the septum is reduced to the thickness of its own coverings of mucous membrane, hence the desired degree of patency of the naris is often obtained with a small removal of the bone and cartilage. In only two cases have I failed to give my patients perfect nasal breathing and the partial result obtained in these was due to inexperience, as they were among my first seven cases.

The operation for elevation of the nose, shown by Dr. Robertson, was beautiful; and he deserves the greatest praise for his superb results. I wish, however, he had given us a diagrammatic presentation of where his wire went; how he made his perforation through the frontal process of the superior maxilla, how the nose was lifted up and how the wire was made to retain it in position.

So-called ledges and spurs (*cristae et spinae*) have been frequently mentioned this evening. These names apply to solid prominences in one nostril without a concavity in the other to correspond to the projection. These are supposed to jut from a septum otherwise plane or to form a prominence upon a deflection. The insight given into the skeleton of the septum by the window resection is equivalent in each case to that obtained from a careful dissection and this experience has shown me the great rarity of ledges and spurs and that in fact these projections are almost invariably simply deflections whose hollow, especially when it is situated some distance back in the nasal cavity, is merely hidden behind a vertical bend in the septum. I cannot recall a ledge that I have found projecting from a plane septum and in the very few forming the crest of a deflection, the deflection created by far the greatest part of the nasal obstruction. It is customary to saw off many deflections with the diagnosis of a ledge or spur. I do not regard the saw in the first place as an instrument well suited for work in the nose and especially upon the septum. It inflicts more pain than any other implement outside of the crushing forceps and hurts even with full cocaine anaesthesia. In addition it does not enter deeply into the structure of the septum but springs away from it and removes merely the apex of a deflection under the name of a crest, that is, a good deal of mucosa and a thin ledge of bone or cartilage enveloped in it, and therefore, even if immediately after the sawing the breathing through the naris be fairly good, regeneration of the mucosa soon reduces the space gained to a minimum. Dr. Ingals has told me that he has had to saw off some crests even three times, as they were continually reproduced. Knowing, as I do now, that practically all projections looking like ledges and spurs are deflections I resect nearly all of them from the bottom and obtain thus a permanently free nostril.

My percentage of perforations has been small and most of those made were of insignificant size. It is a long time since I have

perforated in resecting the cartilaginous portion of a deflection but I do occasionally go through the mucosa of the concavity in removing the bone, especially in difficult deflections far back. The perforations following the window resection however differ from those created by a direct cut through the septum in an important manner. Window resection perforations occur through the mucous membrane only, far away from the free border of bone and cartilage, so that the rim of the perforation after healing has taken place is framed with a rounded covering of smooth mucosa which does not give lodgement to crusts, while perforations created by the saw in sawing off a deflection, a frequent result, or made through all the layers of the septum in some other manner, have a border of bare bone or cartilage from which the mucosa retracts, leaving a surface analogous to a bad stump, projecting bone or cartilage being covered by a cicatrix, well fitted for the lodgement of scabs and crusts. Contrary to the impression I had gathered from text books I have found that the mucous membrane of the septum in nearly all cases is distinct from the perichondrium and periosteum. Supposing at first that these structures were firmly united into one layer of muco-perichondrium and muco-periosteum I often dissected between the mucous membrane and covering of the bone and cartilage. This made denudation exceedingly difficult and simulated great adherence. I now carefully search for the perichondrium and find that in most cases it may be readily lifted off with half sharp instruments except far forward or along the base of the septum, where keen dissection is usually needed. I have never seen any bad results from taking away the supposed support given the external nose by the septum, and no other operator has mentioned them in spite of the enormous number of window resections done all over the world to this date. As an example, two of my cases, both with extensive resections, were put to a severe test lately. One of them, a boy of 13, ten days after I had removed his deflection, received a severe blow upon his nose by a man's elbow but nothing worse occurred than nosebleed and some temporary swelling of the nasal mucosa. The other patient, a boy of 15, ran violently into another boy a week after the operation, bumping his nose against him. The only result here was also nosebleed, the nasal profile remaining perfect. Here are two cases where noses were subjected to violence shortly after the operation but were not in the least damaged. As many of the patients are boys such things must be constantly happening, but I know of no reports that the nose has proven more liable to fracture after the window resection than before.

Coming to Dr. Corwin's paper, I wish to thank him for the credit he has given me in regard to the window resection operation. His instrumentarium I regard as entirely too simple to meet all cases. I do not see that the instruments he has mentioned, which are selected from such as are in common use and are not specialized for the operation, are at all substitutes for those I have carefully thought out

for the window resection through some years of work. Each of my instruments has its place and though in the average operation but a few are in use the odd additional ones fit certain exigencies in unusual and difficult cases. In the beginning I too used Ingals' cartilage knife for the first cut through the cartilage, but found it apt to prick through and make perforations, so I devised the rounded knife I use now, with a blade as thin as paper and of razorlike keenness, which serves the purpose of severing the cartilage along its base from the concave side. The separation of the mucous membrane and supjacent perichondrium has to be done with the half sharp ones where it is readily separable. Blunt instruments, like the Ingals' spud mentioned by Dr. Corwin, I have discarded as I found that I perforated far oftener with blunt instruments than with half sharp and keen ones. This applies also to the aluminum applicator spoken of which is besides too soft and flexible.

Dr. Corwin says that he did but six typical window resections before he began to modify the operation. I think that if he had used my instrumentarium and had followed my methods strictly in a larger number of cases he would not have felt the need of creating new ways of operating. Before changing an established procedure it seems to me one should become thoroughly familiar with it. I regard a 4 per cent cocaine solution as entirely too weak for the local anaesthesia required for the window resection. To make the operation entirely painless, so that it may be done on children without general anaesthesia, it is necessary to apply the cocaine in substance in powder or paste form, as I have described in my first article in 1902. No more cocaine is absorbed than when weak solutions are employed but the local effect is very intense. I never leave tampons soaked with cocaine solution in the naris as the drug is thus spread over a large surface for absorption and while a feeble local effect is obtained there is more likely to be a general one. I have seen syncope from shock and fear, such as was noticed before we had any local anaesthetics, but noticeable cocaine intoxication has not occurred in my cases.

Dr. Corwin uses a stationary light, as I did at first. The forehead electric lamps, especially the Kirstein, are far more suitable. They make the operator independent of a source of light for reflection, a great advantage, for such a light is in the way of the assistants and as it cannot be employed when the patient needs to lie down because of attacks of faintness when he is sitting, it causes the operation to be interrupted whenever he is out of the chair. In contrast to this the forehead lights permit operating on patients lying down, so that there need be no stoppage of the work. In fact, of late I perform the majority of my operations with the patient lying on a high operating chair. The operation is quite as easy as when he is sitting and it is even easier to reach the high parts of the septum, the patient is at rest and not sitting in a strained position, a fact of great advantage in children, and the assistants can see better when swabbing or holding the retractors for the alae nasi. Those who do not want to buy the

expensive Kirstein or O. C. lights may use a fifty candle power, stereopticon incandescent light as this may be held in such a position that the operator can reflect from it while the patient lies down.

Dr. Corwin and most operators that have not an extensive acquaintance with the method describe the separation of the mucosa and perichondrium as simple and it frequently is so, but there are many cases where painstaking dissection with keen blades is required, and in children the minuteness of the parts makes the work difficult.

Packing cotton under the mucosa of the concavity to hold it out of the way has also been tried by me but I soon discarded the procedure, for the cotton filled with blood and could not be distinguished from the mucosa. It is not necessary to hold the mucous membrane away with anything if my method of making flaps be followed.

This brings me to the German way of doing the operation. In this, unlike my method, the first cut in the mucous membrane is made at the anterior end of the septum and the resection is begun from this. My objections to this proceeding are these. If in making the first cut through the cartilage the knife go through to the other side a permanent perforation is created and in the worst place, far in front. In my method, if the knife prick through the mucosa of the concavity, my anterior flap covers the place and obviates a perforation. In the German method the operator works under a long sac of mucous membrane on the convex side, of ever increasing depth, so that it becomes very awkward to keep the mucosa out of the way, a speculum being required for the purpose, and it is difficult to separate the mucoperichondrium beyond the vertical angle of the deflection. As my vertical incision follows the summit of this angle the operator works in a short sac of mucosa, the loosened mucous membrane readily staying out of the way by applying itself to the turbinated bodies. Devices for holding the flaps aside always interfere with the work, and even a probe is an obstacle.

No operator seems to use the saw in the window resection. It is not fitted to follow the bays and prolongations of the deflection as do the punch forceps and chisel. The end of the saw must necessarily punch through the mucous membrane of the convexity or concavity behind, thus tearing them; the saw can not remove the not infrequent deflections that ascend into the perpendicular plate, for a saw can only work antero-posteriorly in the nose and in a straight line, and the instrument is soon hidden in blood and thus operates blindly as compared to the punch forceps. The type of the latter I employ is still that of Gruenwald. The punch forceps needed for the bone must be long so as to cut out deep deflections that reach nearly to the posterior end of the septum. In must be as slender as possible so that it will not block vision, but must be strong so that it will sever the thickest bone encountered. It is hard to unite these qualities but I think that a recent modification I have made of the Gruenwald forceps, giving it

strength by using a forceps and not a scissors handle and facility in use by having the blades open laterally, has produced a good instrument. In cutting through the bone it is often impossible to go through at the first cut and in this case it is necessary to keep biting away with the jaws in one place until one punches through. In some cases, massive bone far back in the naris, that cannot be seized with forceps, must be cut away with a trephine.

I do not use iodoform packing, it smells offensively, is poisonous and is not reliable in keeping the tampon fresh. I still adhere to my bismuth packing: it has no odor, is harmless and the bismuth will absolutely prevent decomposition in the tampon for even ten days. I have of late improved my method of packing. Previously I introduced a long strip of line, tucking in a little bit at a time, until the nostril was full. I found however that some one badly placed fold would become wedged and block the entrance of the others and the result was a loose tampon where I thought I had a firm one and hence occasionally I had delayed hemorrhage. In my present method I fold a short strip of the bismuth lint in its middle and placing the end of a stiff nasal probe into the bottom of the fold so formed, I push it on as far as the naso-pharynx, the two ends hanging out of the nostril. The fold is then firmly packed with the probe into the bottom of the naris, and while the ends are held against the upper lip with the finger a second folded strip is passed in on top of the first to the same distance, this is also packed down and a third and fourth is introduced and so on until the naris is nearly filled with strips. The last one is tucked in in the old way. This packing entirely prevents derangement of the flaps and is so exceedingly firm that it prevents even a minimum of the delayed hemorrhage due to vascular relaxation after the effect of cocaine and adrenaline is gone. The deep parts of the naris are in addition as well protected as the front so that this mode of packing will also insure the absence of bleeding after ablation of the posterior and of the inferior turbinated body.

As to reaction I have never had a patient suffer more than trifling pain after the operation, even children do not complain, and the patients are able to sleep the first night.

I have not found it necessary to use any other after treatment than a spray of physiological salt solution and occasionally when there is a tendency for the secretions to dry, I have the patient introduce a wet cotton plug to soften them. I also often have him use an ointment of lanoline 6 drachms vaseline 2 drachms and salicylic acid 10 grains to prevent crusting.

Dr. F. G. Stubbs: With reference to the paper read by Dr. Robertson, it was interesting to me, and the feature that appealed to me, as it did to Dr. Freer, was the use of silver wire which was not entirely buried. If part of the wire could be seen afterward, would it not act as a foreign body and suppuration ultimately result?

Like Dr. Freer, I would like to know how much strain is to be put on the cartilage to hold it in place, and whether the writer of the

paper reduced the crumpling of the cartilage or not? If not, would not the resiliency of the cartilage tend to maintain its place without the wire.

As to the various operations referred to by Dr. Robertson, they can be covered in speaking also of Dr. Corwin's paper. It seems to me, that there will always be various methods of operating on the septum. For all purposes, the window resection operation appeals to me as not only the most natural, but one of the most perfect in its results in the majority of cases, when it is performed by one who understands it. Yet, as Dr. Freer has pointed out, if we have a large roomy nose, many of these other operations will give satisfactory results; but there is always a slight stenosis or a rough septum following the Asch or Gleason operation. You may reduce, to a certain extent, the obstruction on one side, but there is an obstruction made on the other side to a greater or less extent, and perforation is more apt to follow, no matter how skillful the operator is in performing those operations, than it is with the window resection operation after one has once had experience with it. Krieg in his operation sacrifices the mucous membrane entirely on the convex side. He made his incision (primary) by the galvano-cautery, dissected up the mucous membrane on the convex side did the same on the concave side, and removed the cartilage and mucous membrane on the convex side. The result was satisfactory, when carried through, in correcting or removing the deviation, but it left a raw or denuded surface which required from six to eight weeks to heal. That brings up the question whether it makes any difference as to scar tissue replacing normal mucous membrane. It appeals to me as I think it does to the majority of rhinologists, that we should by all means, if possible, leave normal mucous membrane in place of scar tissue in the nose. We destroy the moist surface with its mucous glands in that part, and also the ciliated epithelium. Perhaps there is almost as much damage done by depriving that part of the nose of this as there would be to leave a small deviation. Agreeing that it is best to leave the mucous membrane on both sides, if possible, it brings up the question of how to do that. Kilian a good many years ago advocated and insisted that the mucous membrane should be left on both sides and devised a plan for so doing. Then, Hartmann and Peterson did the same thing. The Hartmann-Peterson line of incision in the mucous membrane on the convex side is about the same as the line of incision Dr. Corwin has outlined on the board. The removal of cartilage varies with different men who have thought on this subject. The main thing is to remove the cartilage entering into the deviation, so that the deviation will be entirely relieved, and the septum assume the straight horizontal appearance, and that, in most cases where this operation is skillfully done, will be a matter of note. There are few septa that are in the vertical and median line of the head in the average so called normal person.

The question of the point of incision varies, as Dr. Freer has mentioned, some advocating

that it shall be made far forward at the anterior end of the cartilage; others that it shall begin where the vertical line of the deviation commences. I think that also depends on the experience one has had as to the operation. The advantage in entering far forward affects the edges of the incision, so that after the cartilage is removed, there is no danger of flaps being displaced by packing, and the length of time the packing is necessary to remain is shortened very materially. In the operations I have done, making the incision far forward. I find, as a rule, on the second day I can remove practically all packing, and have the patient wear a little cotton in the anterior part of the nose. That is much easier for the patient than to wear it for ten days, and it is easier than to wear a tube from one to five weeks. If the incision is made far forward one also has a better command of the field of operation. The main and chief objection, as Dr. Freer mentioned, is that generally you find cartilage and perichondrium more adherent anteriorly than in any other part, excepting over the sharp angles of spurs or deviations. I have found the more I have done that the easier I get along. After I took more time at first and found the line of separation between the perichondrium and cartilage. One is very apt to start in separating the mucous membrane from the perichondrium, and thinking he has a start, but as you go along the elevator will break through; whereas if you keep in close contact with the perichondrium there is less apt to be a perforation. The second objection Dr. Freer offered is well taken. If you have perforation on both sides, it is going to stay, if it is exactly opposite the point of incision you originally made. That same thing holds good however, no matter where you make your incision. If you have perforation on the concave side opposite the incision you make on the convex side, you are going to have perforation there, although the farther back you have the perforation the less objectionable it is. By exercising due care in starting on the convex side, that danger will disappear the more operations one does.

As to flattening of the nose, I do not think future generations will change the verdict that now exists as to the fact that the window resection operation will not destroy the bridge of the nose. It should be brought out that there should always be a strip of cartilage left high up where the two alae of the nose join the septum, especially far forward, because the three strengthen, whereas the two might give way. But it is seldom you will find the deviation extends to within one-eighth or one-quarter inch of the roof of the nose.

Where you separate the perichondrium, or rather at that point where it becomes periosteum, that is, near the floor of the nose, if you do not keep snug to the bone, you will get hemorrhage—at least, you are more apt to get hemorrhage there, although it is not of a serious character, than any other place along the septum. It is absolutely essential to keep close to the bone.

As to the instruments one may use, it is a matter of choice. Unquestionably, Dr. Freer

has devoted considerable time and thought to instruments, and he manipulates them and knows every time when to use one or the other. That is the case with every one who uses a special set of instruments. If he begins with a few instruments to do these operations, he will find that he can use more and more to accommodate him in the different features. However, it is unnecessary, in my opinion, to have a large paraphernalia to do the operation. Especially is this true where we go in from the front. There we can separate both sides, and instead of cutting through cartilage, with the danger of cutting mucous membrane on the opposite side, we cut cartilage away from the front; we can do that with alligator scissors, taking out a large piece, and we can use cutting forceps taking off what is necessary, and in this way you can follow back, going upwards or downwards.

Another point: in going in from in front it is wise not to attempt to separate too far back at one time, on the convex side; if there are no sharp angles on the concave side you can separate the mucous membrane clear back and see every inch you are covering. On the convex side you cannot see beyond the greatest line of deviation, so that it is best not to attempt to separate far back until you have once gotten in; then the cartilage will yield more and more, and you can more easily deal with the more potent parts of the deviation.

Dr. Freer: With regard to packing, I frequently take the packing out in from twenty-four to forty-eight hours, and my procedure offers no objections to its early removal.

Dr. P. J. H. Farrell: As we have heard all that can be said practically about the various operations for deflected septum, it may not be out of place to say something from the standpoint of the patient. I was operated on six times, as I had no breathing space for years in one nostril. I ran the gamut of several "popular" operations, and narrowly escaped the Asch and a few others. The cautery was used a number of times. The results were failures, of course my disappointing experiences were years ago and before I studied medicine. I consulted able men, and believe that I was an obedient and confiding patient. Dr. Freer was kind enough to take my case in hand, and operated upon me about a year and a half ago.

There is one point particularly that I would like to refer to, and that is a small perforation through the bony parts. That is beyond question of no importance, so far as the comfort of the patient is concerned. I had no discomfort following the operation, and the result, as far as I can judge, and so far as the breathing space and comfort is concerned, is perfect.

The manner of dressing has been referred to. I have not heard advocated tonight a dressing recommended by Pischl, of San Francisco, that is the use of collodion. Dry the nostril thoroughly and apply collodion with air pressure of twenty pounds, which causes immediate evaporation and forms a firm coating. I have tried this and it has given me ideal results requiring no other dressing.

The instruments Dr. Freer has devised are

as near perfect as can be. However, I have found the ordinary knife that I used when doing general surgery in operating for hernia (blunt-pointed knife) has been of great assistance, and has done away with the majority of instruments used for the purpose of separating the cartilage.

I have also used powdered cocaine, and like Dr. Freer, have had no toxic symptoms. It has been used with perfect comfort to my patient, and it was used in my case when I was operated upon.

With reference to the saw referred to by Dr. Freer, I want to say that one can use a saw in the nose with perfect freedom, and with greater comfort to the patient than the cautery. The odor from the cautery is the most disagreeable and horrible thing you can inflict upon any patient. I speak from the standpoint of personal experience in that respect, because I have had the cautery used in my own nose. Use a saw or knife and you will have better results than with a cautery. No cautery operation is a success, the scar tissue, friable, hyper-sensitive and dry that follows its use is always as bad and in many cases worse than the original condition that it was used to remedy. I am doing the Freer operation in all appropriate cases that come before me and my results are better than ever before.

Dr. J. Holinger: The case reported by Dr. Robertson showed the possibilities of early interference in cases of fracture of the nose. The bony septum deviates to one side, the cartilage to the other; in this way both sides of the nose are obstructed. With a probe inserted in each nostril the nose may be lifted up. One can usually replace the edge of the cartilage to the edge of the bone and keep it there by packing, and secure a good result.

As to the septum operation for old and for congenital deviation there is another method which has not been referred to, but which certainly has advantages. That is the operation from the concave side. The convex side is filled by the convexity plus the usually swollen lower turbinal, leaving very little room. If you go in on the concave side you have a wide space from the start. You can dissect mucous membrane through any form of incision, usually a half circle. Going through the septum you make a vertical incision in the cartilage. You separate the mucous membrane and perichondrium from the convex side of the septum. Then you luxate the cartilage after cutting it into the wide open concave side. This operation I have done and have seen done, with very gratifying results.

To go back to the operation that has been described, I have two suggestions to make. First I have found repeatedly one great difficulty which was mentioned before in conversation to Dr. Freer. It concerns the base of the deviated septum: You dissect the mucous membrane down to the floor of the nose. The horizontal shank of the deviation is very low and parallel to the floor of the nose. The deepest part is usually hard and bony. In this narrow space you have to insert a chisel horizontally and chisel out the base of the septum. The Green-

wald forceps will not do. The chisel is the only instrument I could use for this purpose. Another point which has not been mentioned to-night concerns the edge of the vertical cut. The mucous membrane after its cartilaginous support is removed is very apt to curl or roll in, thus obstructing the convex side. The edge of the cut must therefore be unfurled with a probe and held in place with a tampon. An oversight of this last stage of the operation is liable to spoil a final result.

Dr. Norval H. Pierce: I was very much interested in seeing this operation performed on the other side of the ocean during the past summer. It is apparently being used to the exclusion of every other kind of operation by some of the leaders. Jensen takes from fifteen to twenty-five minutes to do it, in the most severe cases, and Killian takes even less time. They both require assistants to hand them the instruments and swabs, and depend upon cocaine anesthesia instead of general anesthesia. Jensen uses a 10 per cent cocaine solution, packed into the nose on pledgets of cotton, without any hypodermic or submucous injection of cocaine. Killian, on the other hand, uses a ten per cent solution of cocaine, packed into the nose on pledgets of cotton, and a subcutaneous injection of two per cent solution of cocaine, a syringe containing two drops of adrenalin solution. All the operators I saw at work used the anterior incision, that is, an incision beginning at the mucocutaneous junction and extending as far as could be guided by the sight through the anterior nares. The Killian operation or incision is practically straight; while Jensen uses a more curved incision, carrying it somewhat along the floor of the nose. I saw no perforation except in those cases that were operated on previously by means of the saw or by some other method, where adhesion had taken place between the cartilage and mucous membrane, or where the mucous membrane was replaced by scar tissue, so that I must say, I think the danger of perforation from this operation, when it is performed by men who are accustomed to do it, is very slight. I believe the anterior incision gives one a full view of the field. As soon as the mucoperiosteum is dissected up, the blades of the nasal speculum are put in between the mucoperiosteum on each side and septum holding it apart, so that you can see the cartilage wherever you cut, and it is remarkable how distinctly that cartilage sticks up there, a white body in a dark field. In getting rid of the cartilage and bone, Jensen uses a powerful pair of forceps of his own design with handles directly out of the way, so that vision is not interfered with. All operators use the chisel to remove the bony process of the superior maxilla in which the septum rests, and which in nearly all cases participates in the deviation or obstruction. Killian uses a peculiar shaped knife of his own design to remove the cartilage. (Here Dr. Pierce drew a diagram on the blackboard illustrating the shape of the knife used by Killian.) The dressing is changed at the end of the second or third day, and in the majority of cases left out, without any other dressing, and the

results are perfect. One needs to go no further in searching for an ideal operation. Since I have returned home I have performed it three times, and while I have torn the convex flap somewhat, the incision can be made that is as clean cut as an incision in laparotomy, without any tearing whatever. I have had no perforation, and have been able to take the dressing off at the end of the third day.

There is an important part of the technique which I would like to mention, and that is the use of the ordinary surgical mackintosh. A strip of it is cut so that it will fit the operative field. It is first disinfected with pure carbolic acid, washed with boiled water, and then through a nasal speculum, while still wet, is plastered over the field of operation, covering the incisions, lapping well over them. A piece of this mackintosh is allowed to remain outside of the nose, one blade of the speculum keeping it in place out of the way against the septum, and the nasal tampons placed over that to keep it in place. This prevents adherence between the tampons and the surface, and I regard it as a valuable part of the technique.

Dr. Joseph C. Beck: About two years ago, during the meeting of the Americal Medical Association at Saratoga, Dr. Emil Mayer, of New York, criticized Dr. Freer and the stand he took in advising this operation in comparison with the Asch, and I was the only one present at the time who could say anything, except Dr. Freer, in behalf of the Freer operation. I said at that time that I had done the operation twice with fairly good success. Since that time I have practiced the operation with less instruments than Dr. Freer has advocated. But the oftener I do the operation, the more instruments of his I use. I require the set of instruments that he advocates. The Freer operation has given me very good results, and it is only rarely that I do the Asch operation now. I have never had any perforation or sign of it after this operation. I have done it four times under general anesthesia in young patients ranging in age from eight to fourteen, and I can do it much better with a general anesthetic. With a general anesthetic one does not need to be in such a hurry. I do not use powdered cocaine, but a five or ten percent cocaine solution. I never use adrenalin solution in these operations. Perhaps I should have said that I have not used it lately, but cocaine which I believe is sufficient to stop hemorrhage.

Dr. Casselberry: Have you any good reason to offer for not using adrenalin?

Dr. Beck: At a meeting in Denver I reported two cases in which I had some trouble following the use of adrenalin. In these two cases there was not the ordinary fainting, but a genuine shock following the use of adrenalin. In one case I combined it with cocaine and injected it under the mucous membrane. I had never done it before, but heard it was a good thing, and I used it in that way. The other case was one in which I used adrenalin and then packed, and had a similar condition.

Another thing which we hear of is secondary hemorrhage. I have done this operation twenty times in two years, since Dr. Freer has advo-

cated it, and this bleeding was one of the disagreeable features. Another feature is the tearing of the flaps. Before I resorted to the Freer method, occasionally I would have tearing of the flaps, but since I have been doing the Freer operation and using his instrument, I have been able to guard against it.

Dr. William E. Casselberry: With reference to operations for deformities of the septum and, first, for deviations of slight degree, the cartilaginous septum being simply bowed but occluding one nostril; in these it would seem that the window resection operation is not always necessary, and I have used successfully in such cases the Roe operation. I hear it very little spoken of in this city. I refer to the Roe operation for deviation of the cartilaginous septum, not the crushing operation for bony deviation. It consists in making a crucial incision through the muco-perichondrium on one side, and through the cartilage, but not through the muco-perichondrium on the opposite side. One makes an antero-posterior incision, a vertical incision, and as many others as are necessary to weaken the resiliency of the cartilage, and then forcibly presses it toward the concave side and inserts a gauze plug. I have had good results from this operation, the septum remaining approximately in the center without perforation, and the individual retaining his cartilage. This operation is not suitable for extremely angular deviations, and should not then be attempted.

The next class is that of very pronounced circular or even somewhat angular deviations. For them I feel that the Asch operation has been underservedly condemned. Perhaps, it has not been actually condemned, but that would seem to be the drift of the argument tonight. I have made many Asch operations, and I cannot say that any one has been a total failure. Every case has been at least benefited and some have been brilliant successes; in fact, the average degree of success has followed the Asch operation. It can be done under ether anesthesia, consequently upon young as well as adult patients. In my practice I have found many whom cocaine anesthesia will not satisfy; they cannot hold still for the time necessary to make a window resection operation, hence I am not prepared to condemn outright the Asch operation in favor of the newer window resection. I will say in this connection, however, that much has been attempted under the name of the Asch operation that Asch never intended. Asch and his follower Mayer, specifically designate his operation, as suitable only for cartilaginous deflections. We all know that in nearly every case of cartilaginous deflection there is some degree of bony deflection. That goes without saying. In many of these cases the bony deflection is slight, and will be pulled back with the cartilage, but if the bony deflection is marked, Asch emphatically mentioned that his operation is not intended for it. Nevertheless most of us who have followed the Asch operation, have quite properly supplemented his incisions and procedure with the additional crushing operation for the bone, and with this I come to the crushing operation. I feel that it,

also, has been undeservedly condemned this evening and in too broad terms. I have never had any accident from the crushing operation; I have never seen meningitis follow it, or any more serious results than from other operations. I have not been made familiar with that extreme degree of traumatism and shock that have been alluded to, hence I am reluctant to relinquish the crushing operation, considering it suitable for wide angular bony deviations which project far backwards in the nose. In a few such cases I have had excellent success with the Gleason operation. It was long before I was willing to attempt the Gleason operation in these cases in which it really is most suitable, that is where a wide angular deflection runs far back thinking I might fail to get the saw all the way to the rear, and thus fail to replace the whole of it, a fault which is obviated through the suggestion to use the saw from the concave side on the rear part of the deflection. I have had a recent case in which I think the result is ideal, in which there was a wide deflection, very angular doubling up towards the right. After studying the case carefully the conclusion seemed reasonable that a window resection operation might easily prove unsatisfactory in it because of tediousness or even failure to dissect up the mucosa to the backward depth necessary. The Gleason operation practically fulfilled all indications, hence I am reluctant to relinquish it in certain cases in favor of window resection.

The class to which the window resection operation seems best adapted and to be a real improvement on former methods is that of very narrow nostrils where it is an advantage to save the space equal to the thickness of the cartilage which is sacrificed. One should select for it patients with considerable fortitude. I have heard bitter complaints because of the length of time they were under operation. One of them told me that it lasted two hours. If we can become so expert as to make the window resection in thirty minutes, actual operating, we will find more and more patients who will have the necessary fortitude. That there are other difficulties connected with the window resection operation, I think all speakers concede. One of them is the difficulty of avoiding destruction of flaps when you dissect back an inch or so on the septum and around the angular spur. However, with the instruments Dr. Freer has perfected, these difficulties are minimized. With this understanding, I think we are all adopting it more and more.

Dr. Corwin (closing the discussion): You have all listened to me with a good deal of patience, and I do not wish to prolong this discussion unduly. I simply want to make two or three references to the remarks of the gentlemen who have preceded me.

This matter of variation in technique is very important as expressing our individuality. But any man who says I do this, and it is the best and only method in the world, is out of place here.

As to packing, both the methods of Dr. Freer and Dr. Casselberry are suggestive to me. I shall try them. As to where the incision should

be made, that will always be a debatable question and will probably vary with the kind of case that is presented. After all, it is the principle of this operation we are after, taking out this deflected portion of the septum subcutaneously by whatever method or incision seems best adapted to the case. In small deflections of the septum, I can readily see how the anterior incision may easily reach them. But how a deflection of this exaggerated type, pressing against the outer wall, can be quickly and successfully manipulated through an anterior incision, is to me at present passing strange. The free flap operation on the other hand gives us quickly a complete command of the field. It matters not however what incision we make. Window resection is the thing we are talking about. It is comparatively seldom that a deflection begins at the bridge of the nose, filling up the entire nose. Our operations will usually leave a considerable amount of cartilage above the window, and in front and in ninety per cent of our cases there will be a considerable part of the bony septum left behind. There is simply a removal here of cartilage and bone with little or no danger of subsequent weakness.

As to the use of the saw, I did not mean to convey the impression that the saw is the only instrument with which I remove this bone or cartilage.

But I never yet, in the sixteen or seventeen cases I have operated on, have seen a case, and some of them were very bad, in which I could not remove the obstructing portion nicely with the saw and quickly, with little shock and with little pain, if I applied cocaine as it should always be applied.

A regular meeting was held November 1, 1904, with the President, Dr. John Edwin Rhodes in the chair.

Case of Radical Mastoid Operation.

Dr. J. Holinger: Mr. President and Gentlemen—My reason for showing you this young lady is the same as the one I advanced when I exhibited a patient to you last summer. This case shows a comparatively quick result after a radical mastoid operation of both sides. The reason why a number of radical operations on the mastoid were not formerly done, although they may have been indicated, were among other things, the long duration of the recovery, as usually this duration is measured by months. This young woman had suppuration from both ears for twenty-one years. She had been treated almost constantly without result until she was bordering on melancholia. Her hearing was defective from the beginning. She understood conversation close to the ear only. Her hearing was not improved by the operation.

The operation was done four weeks ago in the usual manner. A Y-shaped incision was made in the concha. The cartilage was resected between the two parts of the Y. In one ear an accident happened. It was this: When I resected the cartilage I made a buttonhole in the skin, but I challenge any of you to detect which ear it was, because you cannot see anything.

The upper flap of the wound was sewed upward, the lower downward, with subcutaneous sutures, and the external wound closed. The packing was done through the external opening in the concha. It consisted first of packing with iodoform gauze, which was left in for five days. Afterwards, every day the packing was changed until the wound was in a healthy granulating condition. Then one-half per cent of nitrate of silver salve was inserted to cauterize, so to speak, the points of granulation. As soon as a smooth granulating surface was created the wound was cleaned and simply dusted with Vioform powder. From the start you could see the epidermis progressing from the margin of the wound into the antrum and over the remaining granulating part. Nothing has been done since last Friday, so that if there was any amount of suppuration it would show. For four days the wound has remained dry.

Discussion.

Dr. Edwin Pyncheon: The remarks made by Dr. Holinger in regard to this case imply that because there has been a suppurative discharge from the ear for twenty years or more, there is necessarily to be done, if I understood him correctly, a mastoid operation. I recall two cases wherein there had been a foul-smelling suppurative discharge from the ear which had lasted for twenty or twenty-five years, and in each case there was complete cessation of the discharge without any such operation.

Dr. Norval H. Pierce: I would ask Dr. Holinger as to the condition in which he found the mastoid cells, and especially as regards the condition of the mastoid antrum?

I would like to add, that to me the Y-shaped incision extending to the concha, using the concha to cover up the posterior bony defect is unnecessary mutilation. I know that this is recommended by some of the best operators, but I believe we can gain enough tissue from the external auditory canal, stopping before we get in to the concha, to produce equally as good results as we have here.

I recall to mind a case I operated on five weeks ago for extensive cholesteoma; healing has taken place, and there are no evidences when we look into the ear of mutilation. I noticed in Dr. Holinger's case, too, the mucosa of the middle ear looked very succulent, and I would not be sure but that he will find suppuration or secretion recurring there.

I would like to know, furthermore, whether he has examined this case for tuberculosis? I have been especially interested in this case because I remember seeing the woman four years ago in the Polyclinic at the time I removed a polypus from the middle ear and have since recommended radical operation.

Dr. Joseph C. Beck: I consider the case that Dr. Holinger has exhibited here tonight a very good one from the standpoint of the result. The succulent condition referred to by Dr. Pierce is not marked. If this is an example of Dr. Holinger's surgical results in this plastic operation, it is far better than any results I have obtained in the last two years in this work.

This is an exceedingly good result, and it speaks well for him.

I would like to ask this question, because it is apropos to the remark of Dr. Pyncheon, namely, in what condition was the ear, so far as the tympanic membrane or the remains of the same as to perforation was concerned, and whether the perforation was a central or peripheral one, leading into a bony destructive focus for necrosis, if such a thing be. I ask this question because Heine, of Berlin, in the last number of the *Therapie der Gegenwart*, makes a division of otitis media suppurativa chronica into the operative and non-operative, and refers to the location of the perforation as an important point. No matter if there has been suppuration for twenty years, if the perforation is central, and there is a distinct margin of membrane all around, we should not operate on the case. When it (perforation) is beyond that, anywhere within the periphery of the tympanic membrane, the case is an operative one. Hence I ask the question, what condition the ear was in, so far as perforation was concerned?

Dr. Edwin Pyncheon: With reference to the question of Dr. Beck, I will say that in both of my cases the perforation of the membrane tympani was central and very large.

As regards necrosis, I did not consider anything of that nature. The reason I mentioned the two cases in my previous remarks was this; that Dr. Holinger implied that because this patient had had a foul-smelling discharge from the ear for twenty years or more, the case must necessarily be operated on by the mastoid operation. In the cases I had in mind there was a foul-smelling discharge which lasted twenty years or more and there was complete cure without any such operation.

Dr. William L. Ballenger: Two or three years ago I called attention to the significance of the location of the perforation in the membrana tympani. At that time one of my dearest friends took me to task for taking such a position. I still maintain, however, after two or three more years observation, that the location of the perforation is significant, as Dr. Beck has already stated. A marginal perforation means bone necrosis in the region of the perforation. A central or non marginal perforation means a simple suppurative process without necrosis. Hence this location of the perforation affords useful information in prognosis and in determining the proper method of treatment.

Dr. Holinger has certainly obtained a very good result in his case, although we cannot say, as Dr. Pierce has pointed out, whether the result is going to be perfect or not. It may be, provided the patient has no dyscrasia to prevent healing.

As to the Siebenmann incision, I do not understand that it is simply for drainage, but that it is for the purpose of enlarging the opening, so that the parts can be inspected and dressed subsequently. Whether or not the end justifies the means is a question. The old method of operating was to leave the wound open behind.

I have been using the Ballance incision for the past year, and consider it better in most cases.

Dr. Holinger (closing the discussion): I wish to thank those gentlemen for the compliments they extended to me. I will try to answer the questions that have been asked.

Number 1, as to the Y-shaped incision. The main idea is, not to get a recess backward just behind the entrance of the ear. If you do not make this Y-shaped incision and put your flap backwards, there is great chance for the formation of a niche or excavation there, and that lies usually just on top of the sinus, and if you have not a chance of watching this recess, that is just the place where scales will gather again and progress in the direction towards the sinus.

As to the succulent appearance of the wound I may repeat that I consider whatever fluid there is was merely carried from the Eustachian tube. Around the tube and on the promontory was the only place where you saw moisture. If there is a succulent secreting M. E., the secretion would be much more abundant, and in four days you would see more secretions than you see in this case.

I saw a patient yesterday upon whom I operated over a year ago for exactly that same condition in both ears. In the lower anterior part of the ear there was a drop of mucus no larger than a pin-head, but the M. E., the antrum and aditus ad antrum were dry.

As to the condition of the membrane before operation, I may say that it was totally absent in both sides, and not only the membrane, but a large part of the upper and posterior part of the canal. In one ear the mallet was absent, and in that ear the incus was removed together with a bridge of the aditus ad antrum.

Dr. Pierce says that he removed a polypus about four years ago from the ear of this patient. That answers the question of Dr. Pyncheon as to whether there was any other indication for the operation except the long duration of the suppuration. Of other indications, I mention the fact that the woman was almost constantly treated during the last twenty years. Granulations were removed several times before I saw her. I removed granulations from each ear several times, so that the indications for the operation were ample. We know that a great many of these cases of chronic suppurations of the ear heal promptly after a few treatments. But if a case is not amenable to any treatment, I do not hesitate to advise operation, since the convalescence is such a short one.

As to tuberculosis in this case, I do not see any indication of it. I removed cholesteatomatous scales at different times, but never could see any evidence of tuberculosis, and the quick and complete recovery in this case speaks against tuberculosis. Furthermore, tuberculosis does not show itself in this form.

As to mutilation, referred to by Dr. Pierce, and to the condition of the mastoid cells and antrum, there were no cells present. The whole mastoid process was extremely hard, eburneous and when I finished the operation my instruments were dulled. It was also impossible to go through the process. The antrum in both

ears was small, not larger than the size of a small bean, and contained cholesteatomatous masses and detritus. In short, it was a typical case of cholesteatoma in both ears.

Dr. William L. Ballenger read a paper on
Methods of Operating on the Tonsils.

Dr. William L. Ballenger: There will never be a universal method of removing tonsils. The nearest approach to it, thus far, has been with Mathieu's tonsillitome. Indeed it may be questioned as to whether or not we are not becoming tonsil-crazy. It almost appears, judging from the wholesale removal of tonsils, that the only useful purpose they serve is to afford an opportunity for some physician to decapitate (borrowing the term from Dr. A. H. Andrews), or to remove them in their entirety. The function of the tonsil so far as it is known, should not be lost sight of when the question of treatment is under consideration. It seems that the tonsils are the most superficial of the lymphatic glands of the throat, and perform the function generally ascribed to this class of structures. The enlargement of lymphatic glands usually means that they are over taxed in their function of combating bacteria and other toxic products as they attempt to invade the deeper structures of the system. Should this struggle be continued over a long period of time the gland becomes hypertrophied, where as in the beginning, it was swollen or turgescient. (It is generally believed that the barriers to the ingress of Pathogenic bacteria to the deeper structures of the body are as follows:

a. The inhibitive or germicidal property of the serous and mucous secretions.

b. The machencial barrier afforded by the epithelium and basement covering of the mucous membrane.

c. Bacteriacidal property of the lymphatic glands.

d. Should the germs successfully pass through the foregoing barriers they are next found in the lymphatic circulation where the germicidal process is still further carried on. The bacteria still surviving are carried to the deeper structures where they meet other lymphatic glands as for instance, cervical and bronchial glands. They thus pass through various structures until they encounter the resistance of the endothelial lining of the small blood vessels and finally enter the general circulation. The phagocytic action of the white blood corpuscles is effective all the while. If this general statement of the relation of the tonsils to the other barriers of bacterial invasion, is accepted it is clear that the tonsils are only one link in a chain of barriers to bacterial invasions. Its removal therefore cannot be the great physiologic calamity some would make of it. Nevertheless the tonsils should be respected as one of the functioning organs by which the system is protected from bacterial invasions. If, however, the mucous membrane and epithelium covering the tonsils are diseased in such a way as to foster, rather than to destroy bacteria, and the tonsils are also hypertrophied or hyperplastic, there can be little question as to the advisability of removing them, as their pro-

tecting power is very much diminished or lost altogether. In those tonsils, however, in which there is considerable enlargement due to simple congestion, and the epithelium and mucous membrane of the tonsils are not broken down, and the resisting power of the mucous membrane and tonsil are fairly well preserved, other than surgical measures should be tried.

We conclude, therefore, that there are chronic affections of the tonsils which may be cured by other than surgical measures. Before entering into the discussion of the tonsil operations we will briefly consider those conditions wherein surgical interference is unwarranted. Of course it goes without saying that primary acute tonsillitis of all types is not an indication for operation. Enlargement of the tonsils from turgescence is often mistaken for hypertrophy or hyperplasia. Such a mistake need not be made if the operator makes a digital examination, together with ocular inspection. Such a procedure would reveal a rather small but soft tonsil, turning much paler under finger-pressure. Such tonsils do not always need operating. The enlargement is due to the congestion which is probably due to an irritation within the crypts of the supratonsillar fossa, or within the pocket created by the plicatonsillar. These spaces should be carefully inspected and their crypts cleaned out with a tonsil-hook or with a syringe. Many cases thus treated will be relieved, the enlargement of the tonsil subside, and the fauces assume very nearly their normal appearance. More might be said upon the non-surgical treatment of chronically enlarged and diseased tonsils but this single reference must stand as suggestive of them all.

Having decided that the case before us is an operative one what method of operating shall be adopt? Among the well recognized methods of operating we have the following from which to choose:

(a) The tonsillitome or guillotine; (b) the cold or hot snare; (c) the scissors; (d) tonsil knives; (e) the punch forceps; (f) cautery dissection; (g) Kilian's incision of the tonsil; (h) combined dissection and ecrasseur or tonsillitome; (i) ignipuncture; (j) the finger; (k) the strangulation forceps and snare, etc., ad infinitum.

The operations should be considered not alone from the standpoint of the instrumentation, but, with reference to whether the operation consists in a mere incision with acid applications as in Kilian's procedure, a simple cauterization of the crypts, decapitation, or the complete removal of the tonsil.

It may be said in reference to Kilian's incision and acid application that it is almost as severe a procedure as tonsillectomy, indeed, the acid application is quite painful and often prolonged in duration, while the ulterior results are not to be compared to complete ablation of the tonsil. The choice of this method, therefore, is based upon fair results, a theory, and a name.

Mathieu's tonsillitome and the Mackenzie's guillotine and their modifications have long been the instruments of election, but their use has been practically limited to tonsilotomy or par-

tial removal of the tonsils. Dr. A. H. Andrews has happily termed this method of operating "decapitation." If simple decapitation is desirable the Mathieu's type of instrument is perhaps the most universally liked. A practical question in this connection is, when is decapitation of the tonsil desirable? I believe it may be said that it is never desirable, but that it is often permissible and even justifiable. That is, all things being equal, it is nearly always best to remove a chronically diseased tonsil in its entirety. This can not always be accomplished, however, without resorting to means all out of proportion to the conditions to be relieved. In other words a tonsillectomy need not be preformed when a simple tonsillotomy will effectually relieve all symptoms complained of. Decapitation or tonsilotomy may be resorted to in children whose parents demand a quick operation without anaesthesia, and in those cases in which the tonsils are moderately hypertrophied, soft, and non-adherent to the pillars of the fauces.

We may say, then, that while tonsilotomy is often justifiable or even desirable, it is nevertheless, a make-shift, in lieu of better operative methods.

The great question, after all, is, what are the best methods of completely removing the tonsils?

The most ancient of all methods is still practiced occasionally, namely, dissection with the finger.

The writer has, in a very few instances thus removed them. He does not commend finger dissection but mentions it to show how loosely attached the tonsils must be to enable the operator to hull them out in this way. It should be stated, however, that it cannot always be thus removed as inflammatory adhesions often bind the tonsils in their place so strongly that nothing short of cutting instruments will detach them. The point we wish to emphasize in this connection, is, that the tonsil is often very loosely attached to the pharyngeal aponeurosis and its dissection may be easily and quickly accomplished.

Complete Dissection with Knives.

The author has a treatise which was published in 1843 which describes the complete removal of the tonsils with blunt pointed bistouries, such as are still offered for sale by instrument houses. This author recommended seizing the tonsil with a vulsellum forceps and pulling it toward the median line. While thus tensely drawn the blunt pointed bistury was used to dissect it from its attachments. He claimed to cure chronic tonsillitis by this procedure and was ostracised by the medical profession for a period of twelve years for making so ridiculous a statement! Tonsil knives of various shapes and designs are now on the market for this purpose. The writer has depended chiefly upon the right-angle knife of Kyle. The tonsil is seized with a Vulsellum forceps, one prong being inserted well into the Supra-tonsillar fossa, while the other is placed at the base of the tonsil. While in this position the forceps are firmly pressed outward and

closed upon the tonsil. By so using the forceps the bulk of the tonsil will lie well within the prongs of the forceps between the shanks of the instrument. If the tonsil is more superficially grasped it tears through the prongs and escapes the grasp of the forceps. Further-more, the deep grasp of the forceps lifts the tonsil from its attachments and renders the further dissection comparatively easy. Such a grasp enables the operator to complete the dissection without the necessity of readjusting the forceps. This, of course, only applies to favorable cases, as in most instances the patient will need to free his mouth from blood and secretions several times before the dissection is completed. Personal experience with the use of tonsil knives has lead me to regard them as useful instruments, though attended by considerable primary hemorrhage.

Tonsil Dissection with Scissors

Has been rehabilitated with dignity and great promise by Dr. C. M. Robertson, of our city, who has devised an ingenious though rather complex tonsil scissors, with which he dextrously removes the tonsils of children and adults. The writer has had no personal experience with Dr. Robertson's scissors and does not feel competent to discuss their merits or demerits. We are not however, altogether unfamiliar with scissor dissection. There are two kinds of scissors in use by the writer, one designed by Dr. J. C. Beck for freeing the pillars, and the other a modified uterine scissors by Dr. Pyncheon. Both are well adapted to tonsil dissection.

The technique of the scissors dissection as performed by me is as follows:

a. Thorough cocainization or general anaesthesia.

b. The dissection of the anterior and posterior pillars from the tonsils with Beck's scissors. The blades are pointed and turned at right angles to the shank of the instrument. The extreme blade punctures the line of union of the first anterior and then the posterior pillar with the tonsil near the base of the pillars. The pillars are then rapidly cut upwards to the supratonsillar space. The mucous membrane of the supratonsillar space is next divided thus completing the dissection of the pillars from the upper half of the tonsil. If this is done it is surprising to observe how large a mass of tonsillar tissue rolls out from the tonsillar fossa.

c. The upper half of the tonsil thus exposed should be seized with a pair of vulsellum forceps and the dissection continued with the scissors until the entire tonsil is removed. The whole operation may be done in the time consumed in this description. The bleeding is sometimes considerable, though usually not so profuse but that the field of operation may be kept free with cotton-wound applicators. The operation is, on the whole, a very satisfactory one, and is simple if the preliminary steps are faithfully observed. My experience has been, that if only the pillars are freed, while the mucous membrane at the top of the tonsil is not cut, the removal of the entire tonsil is very much hindered. The preliminary incision rec-

ommended, therefore, is in the form of an inverted U, the loop of the U corresponding to the incision through the mucous membrane of the supratonsillar space.

The Tonsil Operation.

As the writer has had little experience with this method of operating he will not attempt to discuss it, but expresses the hope to Dr. Rhodes, who has recently devised such an instrument, will enlighten us upon its uses in this connection. I can readily conceive a field of usefulness for the tonsil-punch in removing fragments left after other methods of operating, or in removing a portion of a tonsil where it is thought sufficient for immediate purposes. I am not assured that it is adapted to complete tonsilectomy.

The Cautery Dissection of Tonsils.

Dr. Edwin Pyncheon is the great apostle of this operation. He has practiced it for many years, and has done more than a thousand operations by this method. Through his patience and perseverance he has overcome some of the obstacles attending the procedure. For instance the "gagging patient," and the one with a "stubborn uprising tongue" have been conquered by him, by means of a system of coaching, titillation of the fauces, tongue depressor exercises, etc. Most of us would fail to summon the necessary amount of patience required to overcome these difficulties.

The technique is as follows:

a. Thoroughly anesthetize the tonsil with a 10-20% solution of cocaine applied every three to five minutes.

b. Seize the top of the tonsil with a pair of tonsil forceps.

c. Dissect the upper portion of the anterior and posterior pillars from the tonsil with the cautery point raised to bright cherry-red heat.

d. Continue the dissection, separating the tonsil from the pharyngeal aponeurosis, and other structures to which it is attached, until the upper half of the tonsil is freed.

e. Next remove the portion thus dissected by burning through the severed portion of the tonsil at its inferior attachment.

f. After a period of about two weeks the lower half of the tonsil is removed in the same manner. The other tonsil likewise operated, in two sections, the removal of both tonsils requiring from 6 to 8 weeks time.

g. The interim between operations are utilized in massaging, and in making applications of isenglycerine, nitrate of silver, etc., to prevent the wound from filling with granulation tissue, and to prevent the reformation of tonsillar tissue.

Dr. Pyncheon claims for the operation, thoroughness, small amount of primary hemorrhage, and that the ultimate results are a smooth pliable fauces. Others less familiar with the method and results, claim that cicatricial contraction often follows, and causes the patient to complain of an uncomfortable sensation, and of some interference with speech. It is also regarded by many as being followed by great

reaction and infection thus subjecting the patient to the dangers of septicaemia. Secondary hemorrhage is also feared at the time the eschar is thrown off. My personal experience with the Pyncheon operation is limited, but I have often seen Dr. Pyncheon operate and I must confess he does it with great ease and with little discomfort to his patients. I have seen about fifty of his patients in all stages, from the first seance, to ten or more years after the operation. In nearly all cases he has shown me, the results were quite satisfactory. Indeed, his results have been far better than I have seen by any other operator including myself. I do not attribute his great success so much to his method, however, as to the fact that he always removes or attempts to remove, the entire tonsil. Any method will give good results if the work is painstakingly complete. Clean work begets clean results.

My criticism of cautery dissection is that the means are rather heroic and somewhat prolonged in duration.

The Snare Operation.

I have used the cold snare for several years in the removal and decapitation of tonsils, and regard it as a useful instrument in this work. My own work has been done with the Peter's snare, a powerful, though rather clumsy instrument. The guard over the wire loope has always been used. The vulsellum forceps is passed through the loop, the tonsil seized at the top and base, and forcibly pulled through the guarded loop. The loop is then closed and a portion or all of the tonsils removed. If a portion remains it is again seized with the forceps and pulled through the loop and cut off. This procedure may be repeated until the tonsillar fossa is entirely free from tonsil tissue.

The advantage claimed for the cold wire is that it is less liable to be attended by primary or followed by secondary hemorrhage. I am not fully prepared to indorse this view as the most serious hemorrhage I ever saw followed the use of the Peter's snare. I recognize, however, that one case should be given little weight in forming an opinion, hence, do not controvert the statement. There is another objection to the cold snare, namely, the necessity of having two or more instruments ready in case more than one loop is needed to complete the work. If this is not done the operator is under the necessity of stopping to rewire his instrument, a rather awkward, and unsurgical thing to do.

The Ecrasseur and Tonsillitome.

In order to preserve the effect of the cold wire loop and at the same time remove the necessity of rewiring the instrument I have had an instrument made by F. A. Hardy & Co., which is called the Ecrasseur and Tonsillitome. Instead of the wire loop I have used a ring-blade something after the style of the Mathieu's tonsillitome, with the exception of the cutting edge which is rounded after the manner of a cold wire. The instrument can be operated, therefore, as readily as a Mathieu's and at the same time possess all the advantages of the cold wire. There are other blades of varying degrees of sharpness, which may be substituted

for the round-edged one. The instrument thus becomes a tonsillitome and an ecrasseur all in one.

The Modified Dissection Operation.

While I do not wish to be known as an advocate of this or any other method of operating, I nevertheless recommend it to your serious consideration as I have found it to be a speedy, and at the same time a successful method of doing a complete tonsilectomy. While the operation is simple it required two or three years of patient endeavor for me to perfect it to my satisfaction.

The technique:

- a. Anesthesia, general or local.
- b. Dissect the pillars from the tonsil with Kyle's right-angle tonsil knife, or with Beck's tonsil scissors.
- c. Unite the two incisions at the apex of the tonsils (supratonsillar space) thus converting the three united incisions in an inverted U-shape. While the incisions are being made the tonsil should be strongly drawn towards the median line of the throat with a pair of vulsellum forceps after the pattern I have devised for this purpose.
- d. The vulsellum forceps should next be passed through the fenestra of the ecrasseur, the upper blade passed into the U-shaped wound, while the lower blade of the forceps grasps the base of the tonsil. The tonsil thus grasped between the blades of the forceps is drawn through the fenestra of the ecrasseur.
- e. The dull ring-blade of the ecrasseur is then closed and the remaining (lower) half of the tonsil detached.

My experience with this method comprises about twenty-five cases and in nearly all, the removal of the tonsils was complete, and in most respects eminently satisfactory. The bleeding has never been severe, though usually quite considerable for a few seconds or minutes. Without the preliminary dissection of the pillars and the supratonsillar space the operation would be incomplete, and might injure the musculature of the pillars and be followed by cicatricial contractions and adhesions. This happened, much to my embarrassment, in one case in which I neglected to do the preliminary dissection.

The Strangulation Forceps and Snare Operation.

Dr. Ingals has devised a strangulation forceps with which he seizes the tonsil after which he slips the cold wire loop over the tonsil and thus removes it. He reports very satisfactory results by this method.

Some Factors Which Influence the Choice of Method.

Before concluding this paper I wish to make a few general remarks which seem to have some bearing upon the subject under discussion.

There are methods and methods. There are methods that remove, while there are others that decapitate the tonsils. All things being equal I prefer those that remove the tonsils. Of those that remove the tonsils I prefer those that do it in the simplest, safest, most rational

and surgical manner. It seems to me that the (a) combined knife and scissors, or the (b) scissors dissection, the (c) combined dissection and ecraseur and tonsillitome operations come more nearly to the ideal than either of the other methods.

Recapitulation.

- a. There will never be a universal method of removing tonsils.
- b. Respect the tonsil function if it be not already destroyed.
- c. Remember that a chronically diseased tonsil breeds bacteria instead of destroying them.
- d. Decapitation is sometimes permissible but never preferable.
- e. Complete removal is the goal.
- f. The goal is most easily attained by first freeing the pillars and the supratonsillar space.
- g. Having freed the pillars and the supratonsillar space the removal of the tonsil may be quickly accomplished by either the scissors or ecraseur.

100 State Street.

Discussion.

Dr. Edwin Pynchon: We have all been interested and, I dare say, instructed, by Dr. Ballenger's carefully prepared and elaborate paper, in which he has fairly represented the state of the art, so far as the removal of the tonsil is concerned. The particular moral of this paper is to favor tonsilleotomy instead of tonsillotomy, and it reminds me that in the papers presented at the American Medical Association at Atlantic City on this subject and their discussions, tonsilleotomy was favored by nearly all while but few were in favor of so-called tonsillotomy. No matter what method is used for operating upon tonsils, the idea is to remove them thoroughly. My own belief is that when a tonsil is diseased no harm can come to the patient by having it removed most thoroughly.

I feel very much complimented by the remarks of Dr. Ballenger in reference to myself, and as to my particular method of removing the tonsil by cautery dissection. He has covered the field so thoroughly in his description of this method that I can add but very little to what has been said. Originally I took the whole tonsil out, and met with a number of cases of hemorrhage which were unpleasant. I then decided to divide the operation into two steps, and as a result I very materially diminished the number of hemorrhages. However, I do not think the number of hemorrhages was any greater than it would be from operating radically by any other method. Latterly I have been going back more to the original method of taking the whole tonsil out at one sitting. The way I now do is this: I start in with the idea of removing the whole tonsil, and if I meet with any complications, I cut it off in the middle so as to take only one-half.

Dr. John Edwin Rhodes: The punch forcep was devised simply to trim tonsils as a secondary operation rather than as a primary one. I think all of you will agree that it is sometimes necessary, after doing an operation

such as Dr. Freer has described, where the base of the tonsil is very wide, and where the lower or upper fragment is left, to resort to trimming, and I have found these forceps very efficient for that purpose. I have used them sometimes in dissecting out tonsils that were diseased, in adults. In such cases they have answered the purpose very well. I prefer them because most of the other punch forceps on the market are bunglesome instruments; whereas these are small, one can get at the smaller fragments of the tonsil, and inasmuch as only that portion is removed which goes between the jaws of the forceps, one can go as deeply or superficially as necessary.

The scissors like movement of the jaws and the sharp, close fitting, cautery edges make them easy of manipulation and effective in operation.

Dr. J. Holinger: Several gentlemen spoke about tonsilleotomy and tonsillotomy. I would like to know who has microscopically examined these cases after the tonsils have been removed, in order to find out whether or not there was any tonsillar tissue left? I am quite sure, that in every case more or less of the tonsil is left, and that therefore it is very difficult to make a differentiation between tonsillotomy and tonsilleotomy.

Yesterday a young lady came to my office and said, "Doctor, I have trouble with my tonsils, but I do not want to have them removed, because a relative of mine soon after his tonsils were removed developed consumption." How far this statement is right or wrong, I think the future will have to enlighten us.

Dr. Norval H. Pierce: I rise to recite an incident that occurred in my practice last Saturday, which accentuates the point that we should invariably palpate tonsils before we operate on them.

A young girl, twelve years of age, with quite enlarged tonsils, came to me for their removal. I used the Mathieu's guillotine. Everything proceeded all right up to the point of cutting them off, when I encountered some resistance which I took to be the fibrous tissue of the tonsil, and in using more force than is customary I felt my tonsillitome snap, and withdrew it from the mouth minus half the blade. I looked at the patient, and the patient looked at me. Horror was depicted on my face. Don't you feel anything in your throat?" I asked. "Nothing at all," she replied. I palpated the tonsil and found a bony growth in it, but could find no fragment of the knife. I asked her to swallow, and she did. As I had anesthetized the parts, I concluded she could not feel the blade. I then used the laryngoscope, but could find nothing. I picked up the guillotine, and found the other part of the blade snugly ensconced in the upper portion of the ring. It had not moved at all.

I think you will all agree with me that a sad accident might have occurred in this case, an accident that could have been entirely obviated had I palpated the case first.

Regarding the methods of removing the tonsils, I believe with Dr. Holinger that more or less of the tonsil always remains after any method of removal. I do not believe it is pos-

sible to do a complete tonsillectomy any more than it is possible to remove every vestige of adenoids in the post-nasal space without exposing the patient to unwarranted dangers. We should remove as much of the tonsil as possible with safety, and it is not safe to cut down on to the fibrous tissue that forms the lateral confines of the tonsil. It is through this that the tonsillar arteries penetrate, and if we cut them off in the fibrous sheath, their walls are held apart, so they cannot collapse and a clot is constantly washed out and we get these profuse hemorrhages. I believe that a blunt bistoury and pair of vulsellum forceps constitute a method of removal equal to any as with these the tonsils can be removed with simplicity and thoroughness. The more we operate in this manner, the more skillfully can we remove these tonsils, and the more thoroughly and more safely. If we are to choose any one method, I should say that this is perhaps the best but as the essayist has observed we should have at our command various methods to meet various indications.

I have been experimenting with three new hemostatics recently—stravonine, yohimbine and lactate of eucaine. I find lactate of eucaine to be entirely satisfactory; a seven and a half per cent solution, in equal parts of water and alcohol, will produce anesthesia in five minutes, that is very satisfactory. It is non toxic, does not produce cardiac symptoms, exhilaration, nor local ischemia. There has been no secondary hemorrhage, and I believe it is greatly superior in this work to cocaine.

Dr. Joseph C. Beck: There is one method Dr. Ballenger did not mention which in my hands has been very successful, and that is the use of the hot snare after thorough dissection of the tonsil. I have used Gradle's hot snare with considerable comfort, and with no such complications or disagreeable after-effects as some have had. Pynchon's method I have used in some cases with good results.

With reference to the complete removal of the tonsils, I will say that I am collecting material for the next meeting of the American Medical Association on this subject, ascertaining the experience of men engaged in this line of work as to the complete removal of the tonsils. I have examined the cases of other men after the removal of the tonsils, and I want to say, outside of Dr. Pynchon's method, there are very few cases in which the tonsils have been completely removed, even those who have used the punch forceps or different methods. However, the patients who have had parts of their tonsils left are nevertheless well satisfied, and have no trouble. I am on the same side as Dr. Holinger and Dr. Pierce, and believe that in most of the cases the little tonsil that is left does no harm. If you dissect the supratonsillar fossa, you can pull down a little piece of tonsil. Dr. Robertson has been able to do that in many cases. I have watched him pull down a portion of tonsil that is left alone ordinarily.

In regard to the use of vulsellum forceps, I have been experimenting a little with the use of a thread like the gynecologists use in operations on the cervix, and I see in reading

the last issue of the Journal of the American Medical Association that Dr. Myles, of New York, has advocated the use of the same. One can use this as a means of traction, the assistant can hold it, you are able to dissect the tonsil, and then use the snare, without first releasing the tonsil as you do in using a vulsellum forceps.

Dr. Ballenger (closing the discussion): With reference to the remarks made by Dr. Pierce and Dr. Holinger as to the possibility of removing the entire tonsil, I will say that it is possible to do a complete tonsillectomy. Probably this is not often done, but those who survive to do it, can do it. A great many operators simply try to take away as much of the tonsil as may happen to come away. They do not often remove the entire tonsil. There are those who endeavor to completely remove the tonsil and they often succeed in doing so. I belong to the latter class.

Most of you doubtless remember reading an article in *The Laryngoscope* two months ago (the name of the author I have forgotten), in which it was stated that there is usually more than one tonsil between the anterior and posterior pillars. There is sometimes an anterior and posterior tonsil, the anterior one is often unobserved, and during an operation is left intact. Everyone who tries to do a tonsillectomy does not search the recesses I mentioned, and therefore does not remove all of the tonsillar tissue.

The hot snare should have been mentioned as a method of operating, but was overlooked. While some operators use the hot snare, I have never seen the necessity of using it in the removal of the tonsils.

CHICAGO SURGICAL SOCIETY.

A regular meeting was held November 7, 1904, with the President, Dr. L. L. McArthur, in the chair.

Dr. L. A. Greensfelder reported a case of **Thrombosis of the Superior Mesenteric**, in a man 47 years of age, with a pathological report on the organs after removal from the body.

He likewise reported a case of **Intussusception** in a patient, aged 18. In this case operation was successful.

Discussion.

In the discussion, Dr. E. Wyllys Andrews, in speaking of the second case, referred to the friability of the intestine, which he said seemed to be more analogous to a fat necrosis or some kind of degeneration than to peritonitis.

Intussusception.

Dr. A. J. Ochsner showed a specimen from a case of intussusception. The patient was a child, 15 years of age, in whom a diagnosis of intussusception was made seven days after operating for acute appendicitis. About three years previous to admission to the hospital the patient was supposed to have had an acute attack of inflammation of the bowel. There were bloody stools, etc. The patient's recovery from this attack was rather rapid. The second intussusception took place in the ileum, the in-

vaginated portion and was 52 centimeters long. It had existed long enough for the intussusception to become gangrenous, so that the intussusceptive protruded through the wall of the intussusception. After the onset, patient was sent to the hospital with a diagnosis of appendicitis, and operated on at once. Two days after the onset of the second attack, the patient was sent to the hospital by his physician, with a diagnosis of appendicitis, which was confirmed and an immediate operation performed. Upon opening the abdomen, Dr. Ochsner noticed an excess of serum, which was the only feature not referable to the appendicular condition. The boy did not react well after operation, and because of nausea received but limited amounts of water by mouth. This masked the symptoms by controlling peristalsis. At the second operation, a week later, it was found that the gangrenous portions of the intussusception had been completely walled off from the general peritoneal cavity by adhesions formed by contiguous loops of intestine, and the omentum, and preventing a general peritonitis. The gangrenous portions had acted as a foreign body, produced a localized peritonitis, which the absence of vermicular intestinal movements had allowed to become enclosed in the adhesions thus stimulated. On the twelfth day symptoms of obstruction reappeared, and an enterostomy was done for its relief. Death occurred the next day, with no evidence of a general peritonitis.

Dr. Jacob Frank said that about two years ago he reported a case of intussusception of the ileum into the cecum in a child, nine months of age, in whom he resorted to the use of the button, the child making a complete recovery. He exhibited the child before the Society one year after the operation.

With regard to sutures not holding when the intestine was friable, this was seen in cases of appendicitis when the intestine was edematous. One could with difficulty get the sutures to remain in place without cutting through. In cases of intestinal disease in the acute stage, where there was an edematous or inflammatory condition, this was almost always found to be the case. He had found it in a large percentage of cases of appendicitis where the temperature ran high, and where there was gangrene of the appendix.

Dr. D. A. K. Steele said, in speaking of the friability of the intestine and the difficulty of sutures holding, that his experience had been the same as that of Dr. Frank. In many cases of acute inflammatory conditions of the intestine, particularly in appendicitis, and pus tubes or infected tubes in women, there was great edema of the adjacent parts, and the explanation given was correct, namely, that it was due to alteration in the wall of the intestine or tube from mere edema.

Dr. L. L. McArthur said that it was to Koenig that credit was due for emphasizing the fact that the bowel was friable above the seat of obstruction far beyond that which appeared to the naked eye, and venous septic thrombosis was liable to occur which would terminate fatally, although there may have been perfect sutur-

ing, the bowel being friable the nearer it is to the gangrenous area, although being vascular and its nutrition not materially impaired. It was a wise thing to go much farther above than appeared necessary to get a good suture field for the purpose of getting beyond a venous thrombo-phlebitis, which would scarcely show externally, but which would show when one saw the mucosa and submucosa of that portion of the bowel.

Dr. Jacob Frank read a paper on **Perineal Prostatectomy, with Report of a Case by Young's Technique.**

He stated that perineal prostatectomy was destined, on account of the improved technique, to become as leading an operation as that of hysterectomy. The operation in this case was followed by an excellent result.

Dr. M. L. Harris stated that ever since Young proposed his technique to preserve the ejaculatory ducts, he thought much had been made of very little. We knew that these operations were nearly always done on old people who, if they were not impotent, had passed the procreative stage, or even the age when sexual intercourse was often indulged in, and so it never appeared to him to be a point of any great importance; nor could the ducts always be preserved. The method of approaching the prostate was not materially different from that employed by most surgeons when using the perineal route; in fact, after reading Young's description he did not see anything in his method of approaching the prostate which could be claimed as new or original. Personally, he had opened the capsule transversely rather than longitudinally, but not across the mid-line. However, if he found it facilitated the enucleation by making it in a longitudinal direction, he would have done it. His rule had been of late not to pack the capsule after removing the gland, but to suture it. He had brought the walls together by catgut sutures, and by doing this the period of convalescence was shortened.

Dr. E. Wyllys Andrews agreed with the essayist about the general improvement after prostatectomy. He had seen one or two old men who had had their testes removed, and one or two upon whom he had performed prostatectomy, who afterwards appeared to him to be ten years younger, in that the wrinkles disappeared from their faces and they grew less sallow and withered or senile looking.

Dr. Frank, in closing the discussion, said he did not claim anything new in the technique he had described, nor did he say that it was Young's method, but rather Young's technique. It was unnecessary to transfuse patients if the technique of Young was followed. With this technique everything was under control of the eye, and one need not be afraid of a secondary hemorrhage. No operation had pleased him more than when he did the operation in this case.

Dr. D. A. K. Steele read a paper entitled **Gall-Bladder and Biliary Duct Surgery.**

The author referred to the early history of this class of surgery, saying that cholecystotomy was first performed by Bobbs, of Indianapolis, in 1867. In no department of surgery

had the American mind left its impress in a more forceful manner than in the development and progress of the surgery of the gall-bladder and bile ducts. Gall-stones were present in about seven per cent of all people, and proved fatal in about ten per cent of this number. Over twelve per cent of all gall-stone cases showed symptoms of common duct obstruction.

After referring to the symptomatology of gall-stones, and the indications for operation, the views of the author expressed in the paper were exemplified by the narration of seven illustrative cases where early operation was declined or not possible for some reason.

Discussion.

Dr. A. J. Ochsner said the wisdom of early operation in these cases could not be emphasized too much. There was no doubt but what in the vast majority of all patients suffering from gall-stones, cholecystitis, or disease of the ducts, there was a time when the condition could be safely and permanently relieved by an operation, and that the serious conditions which the essayist had emphasized were the result of late conditions.

Dr. Daniel N. Eisendrath said the more he saw of gall-stone cases, the more impressed was he that surgeons were apt to forget the complications on the part of the liver itself. In a paper read by him three years ago, he investigated, made sections and cultures of a case that was operated upon by Dr. Greensfelder at the Michael Reese Hospital. In this case he found scarcely any of the liver cells stained, practically nothing but the inner third around the central vein. If one investigated the liver, in cases of cholecystitis and gall-stones, varying degrees of liver necrosis as a result of infective cholangitis would be found, where there was an associated cholangitis with or without pus formation. The more he saw of the cases of cholangitis, without pus formation, the more he was impressed in almost every case of gall-stones, in which there had been any perceptible degree of infection in the way of elevation of temperature, or chills, or leucocytosis, that there was considerable change in the liver parenchyma.

Dr. M. L. Harris stated that gall-stones were always preceded by infection. They were due to infection. Gall-stones were therefore a secondary condition of the infection. He believed the infection was a descending one. It was not due to the ascending infection, that is, organisms passing from the intestine up the bile ducts, but due to a descending infection. The microbes were eliminated by the liver, and these gained access to the biliary passages. Infection being the primary and chief condition, the surgeon operated to relieve or cure the infection. Gall-stones never gave rise to any trouble until they migrated or became restless. Every operation, therefore, should be accompanied or followed by drainage of the gall-tracts. The gall-tracts should be drained until the flow of bile was sterile.

Dr. Jacob Frank reported a case of infection of the liver. Recently he operated upon a patient for multiple abscess of the liver following appendicitis. Six weeks after the opera-

tion for appendicitis there was fever and other symptoms, and he suspected an abscess of the under or upper surface of the liver. On opening the abdomen, he took a culture from the gall-bladder, then punctured the liver, and took cultures from it. In the fluid, however, there were a few small flakes that did not look natural, but he did not know what they were. The patient died; a post-mortem examination was made, and multiple abscesses of the liver were found. The bile from the gall-bladder was sterile.

Dr. E. Wyllys Andrews believed that surgeons had overestimated post-operative drainage as a curative measure. A statement of this kind as to the curative value of drainage was useful to surgeons in the class of cases on which they operated under mistaken diagnoses, and not having found any gall-stones, they could fall back on the theory of giving benefit to the patient by drainage. This was liable to be fallacious, in his opinion, because it held a half-truth. It was impossible to overestimate the value of restoring the drainage of the gall-tract in a case of obstruction per vias naturales but if this natural tract drainage was restored, he was rather disposed to think that the more he saw of gall-tract work, that external drainage was needed only to save the peritoneum. It was known that a patient who had an obstructed deep duct and external drainage was secured alone, was only temporarily relieved, and after a moderate length of time would die of inanition if all the bile escaped from the fistula. In certain recent cases he had observed instead of a marked and direct improvement following drainage, although jaundice was gotten rid of, there was slow exhaustion. Death did not always occur from peritonitis, uremia, or from cholemia, but from marasmus.

Dr. Steele, in closing the discussion, said it was difficult to convince the general practitioner of the necessity and importance of early operation, even after early diagnoses were made. He hoped this discussion would be of service in helping general practitioners to make earlier diagnoses, and refer their cases to surgeons for early operation.

Dr. James N. Neef exhibited for Dr. John B. Murphy a case of cervical rib.

Dr. E. Wyllys Andrews said that at the Mercy Hospital there had been observed a number of cases of cervical rib.

Dr. Daniel N. Eisendrath said that last spring a woman came to him on account of a tumor of the breast, and on examining her for possible axillary cervical gland enlargements, he came upon a hard mass just above the clavicle and on following it up found it to be a typical cervical rib, which was about three inches in length. He showed the patient at a meeting of the Chicago Medical Society, with a skiagraph. At that time he had collected all of the cases of cervical rib that had been published up to that date, including his own case, thirty-five in number. In addition to these thirty-five cases, which were recognized during life, there were a large number at autopsy.

County and District Societies.

CHRISTIAN COUNTY MEDICAL SOCIETY.

Regular meetings are held quarterly at Taylorville.
Membership 20.

Officers.

President.....W. T. Bridges, Stonington
Vice-President.....Matt Hill, Taylorville
Secretary and Treasurer...F. E. North, Taylorville
Directors.....C. L. Carroll and G. L. Armstrong,
Taylorville; M. W. Staples, Grove City.

The Christian County Medical Society met in regular session, Thursday, October 21, 1904, in the City Hall, Taylorville, Ill. Dr. Bridges, President, presiding.

The minutes of last meeting were read and approved. Sixteen members were present.

The following programme was given:

A Case of Tetanus—Recovery.

Dr. J. P. Simpson: There is nothing new or startling to be announced in this paper; and the fact of the case having recovered, does not lead the writer to covet an undue number of a like sort. For they are only rarely brought to us early enough for the accomplishment of what was in this case, probably the most potent measures for its recovery. The writer, while yet a student in college, once attended a meeting of The Southern Surgeons and Gynecologists; and there heard a Texas surgeon detail his experience with a case of tetanus, which recovered. The whole of his curative treatment may be summed up in the one phrase—**aggressive antiseptis**. His logic was so clear, in the light of our present understanding of the pathology of this disease, as to be most convincing to any one, as it seemed to me. Accordingly, with the first opportunity which presented, his ideas were employed; supplemented, however, with the injection of Anti-tetanic serum.

Following is an approximate history of the case:

Elmer P., 6 years old, never had any serious illness; parents in good health.

On about July 20, 1904, the patient received a slight wound on the plantar side of the left foot, while walking barefooted in the weeds. The wound suppurated slightly a few days thereafter, and was picked open by the parents, with a needle; and after this it apparently healed and was forgotten by them.

At eleven o'clock in the night of July 30th, the father came to have me visit his son, whom he stated was stiff in the back, had a sore throat—he believed—and would awake his slumber with a wild look upon his countenance. Inquiry developed the facts as before stated, regarding the wound in the foot; and the date of its occurrence fixed at July 20th, which, however, is only approximate. The father was at once informed that his son was suffering from lock-jaw; and was ordered to bring the boy to my operating room, without a moment's delay. This he accomplished, by wheeling the boy in a baby carriage, the latter being able to walk,

only with great difficulty, as was evident when requested to walk to the chair. The pronounced lordosis, and sardonic grin gave to the little patient a most grewsome aspect—never to be forgotten by my wife and me, the former having been aroused and requested to administer the anaesthetic.

Surgical Treatment: The wound was opened by a free incision, a second incision was made across the first and at right angles to it, the resulting angles were turned up with tissue forceps and clipped off with shears, leaving a conical opening to admit of free irrigation. A gallon of hot mercuric iodide solution—strength one to four thousand—was allowed to play into the wound from an irrigator suspended about seven feet above the foot, after which the opening was cauterized with silver nitrate, dusted with iodoform and the usual dressing applied. The wound was dressed at intervals of forty-eight hours for a few days thereafter, although not in so elaborate a manner. At the second and subsequent dressings only a small amount of serum was found upon the gauze drainage, the pus cocci which were present before the wound was treated (as evidenced by the induration and redness) having evidently made an immediate and unconditional surrender, before such a vigorous onslaught.

Medical Treatment: No medicine of any kind was given for the first eighteen hours, since it was desired to note the progress of the case, uninfluenced by nerve sedatives.

While yet in the operating chair, and before fully awake from the anaesthetic, the jaws closed with an audible snap; the head was retracted, and the calf muscles became rigid for a few moments. The parents had not observed a convulsion previous to this time. The axillary temperature was at this time 99, and was never found higher than 102 or thereabout. Bromides and Passiflora were administered at irregular intervals, to partly allay the irritability of the cord, the little patient's body having assumed a board-like stiffness on July 31st, and the convulsions were coming on at intervals varying from half an hour to two hours or more. Fresh antiseptic serum had been ordered, meanwhile, and its administration was begun as soon as it arrived on August 1st. At this time the case was also seen by Dr. Jas. Simpson, who proposed the use of Chloral Hydrate to supplement the action of the other sedatives. It was given in from six to twelve grain doses, guarded with digitalis, every two hours as occasion demanded; and its influence was much more marked, upon the convulsions. Ten c. c.'s of the serum were injected into the interscapular region, followed by two more doses of like size in the next twelve hours. The convulsions being much more easily controlled at this time, the serum was discontinued. It was observed that the convulsions affected the various sets of muscles

irregularly; at one time there being marked opisthotonos, and again the masseters were most involved. The writer does not recall having seen this fact related in the literature. The tongue was frequently caught between the teeth, and as a result became much lacerated. Indeed, a piece of it was finally bitten off, giving that organ a crescentic contour at its tip. The convulsions gradually lessened in number and severity until they ceased altogether, about August 15th. It was observed that the shrill whistle of passing trains, some two blocks distant had no effect toward bringing on a convulsion, they were, however, readily induced by little disturbances near him.

Complication and Sequelae: On August 9th, ten days after the case had shown the first tetanic symptoms, and when the convulsions had become so light as to warrant a most hopeful prognosis, the patient had a severe rigor; and developed a temperature of 102, followed by sweating and a return to almost a normal temperature in ten hours. This phenomenon was repeated the next day at about the same hour; and it was deemed advisable to administer quinine, which was now given in two-grain doses every four hours, the family being advised to again begin the use of chloral if the irritability of the cord and an increase in the convulsions demanded it. Within twelve hours from the first dose of quinine the patient became much more restless, the convulsions again increased in frequency, although not alarming in severity. There was a slight rise of temperature on the next day, after which the temperature again dropped to normal; and the quinine was soon after that omitted. No blood examination was made; hence the foregoing is only offered for discussion. On August 22, several days after the patient had been dismissed, the writer was again called; to replace a prolapsed anus.

Bronchitis was present from the first, and lasted until about the third week in August.

The Relation Between Physicians and Druggist.

Dr. G. T. Meacham: For the last forty years the relation of Physician and Druggist, whose interests are of necessity more or less interwoven, has been gradually widening. There are a number of causes for this. The Medical Colleges, of which only a few existed prior to our Civil War, have increased rapidly, in fact, there is one or a dozen in every large city of the United States. This has been followed by an enormous output of physicians, out of all proportion to the demand. These colleges are private institutions, organized by physicians as stock companies, turning out thousands of graduates each year who in turn eventually organize new colleges, turning out more physicians, until there is now one physician for each 500 people. This creates fierce competition among the doctors and the curtailing of emoluments.

In the countries of Continental Europe, there is a well-defined relation between physician and apothecary established by custom and in some lands by law. The physicians' business is more that of diagnosing and treating diseases, leaving the preparation of medicines

to the apothecary. In Italy, the physician is prohibited by law from dispensing medicine, except the emergency kind, and the druggist business is also more closely regulated than in this country. This is made necessary on account of the frequent use of poison in that country for the purpose of getting rid of undesirable persons. The physician in these countries takes an active interest in public affairs, many of them being members of the law-making bodies: Dr. Pozzi, the eminent French gynecologist, is a member of the French Chamber of Deputies and a prominent member of the medical fraternity, has been Premier of Italy. In these capacities they perform valuable services in the matter of sanitation and public hygiene. In our country the laws have dealt principally with commercial matter, and property and the lawyers being conversant with these matters, have so far had a monopoly of the law-making business.

There is beginning, however, an agitation for better methods of living and laws are now being framed which will more carefully conserve the public health, as the establishment of state homes for the treatment of consumptives and epileptics. In the United States the relation of physician and druggist is not a matter of custom, but we find different customs prevailing in different sections of the country, and even in different parts of the same county. With the advent of a great number of physicians have come physicians' supply houses, who undertake to furnish everything used by the physician, thus supplanting the local druggist.

The druggist is no doubt to blame for this to some extent, for instead of trying to cultivate the physician's trade, he has made good his losses in that direction by branching out in other lines, and so the two who as a matter of self-interest should work in harmony, have drifted further apart. The physician who practices in the country and smaller towns is often of necessity compelled to carry his own stock of supplies. Whether the people of a community shall obtain their medicine from a physician or from the druggist on the prescription of a physician, is entirely a matter of education and custom. The writer spent two weeks with a young physician in a town of southern Louisiana. He had a large practice and carried no medicines except in his emergency case; patients were visited six or eight miles in the country, their immediate wants administered to and prescription left for the medicine they were to take: a boy would ride to town to the druggist to have it filled; this had been the custom from the earliest times, and the people expected nothing else.

The reasons assigned by the physicians for discontinuing services of the druggist are the time-honored ones of counter prescribing and refilling on the part of the druggist and also the fact that they claim to make more money by furnishing the patient with medicine: As to the first, the druggist has no right to diagnose cases, but as the public still cling to the notion that they some times know what is the

matter with themselves, he has the right to sell them what they ask for.

As to refilling prescriptions: This can be regulated only by distinct understanding between the physician and druggist as to what character of prescription, if any, shall be refilled without the order of the physician. This is comparatively a new plan and one to which the public must be educated. Like all new arrangements, there will be misunderstandings at first, but eventually this plan will be found to be successful. There is little heard any more of substitution, as no self-respecting druggist, even from a purely business standpoint, can afford to substitute.

To sum the matter up, physicians in the smaller towns must of necessity continue to supply their own medicines, but in the larger cities, where there are progressive druggists and where the people have more ready money, this necessity does not exist.

Under these conditions, whether a man continues to dispense, depends entirely upon the man and his system of doing business. For every man his own system, which he finds most successful in his own case. One man succeeds with a system, and another fails with the same. It cannot be expected that a man who has dispensed all his medicine during his practice, will suddenly change his methods of doing business entirely, for as the old saying goes, "The shoemaker should stick to his last, and you cannot teach an old dog new tricks."

But where the druggists of a town show a disposition to cultivate the doctor's interest, and to carry in stock whatever he may need, to be fair and courteous in their treatment of the medical profession, they should be encouraged. It is the short-sighted policy of discrimination on the part of some druggists, which has discouraged some physicians who would like to give a druggist part of their business. All physicians should be treated with equal fairness and all prescriptions from any physician should be considered sacred. The druggist should carefully refrain from making any comments whatever upon the merits of the prescription or its writer, by attempting to make the patient dissatisfied with the prescription or his doctor, is reprehensible, and is very poor policy for any druggist to pursue. It is a duty the physicians and druggists of a community like this owe to themselves and to the public, to make a continued effort to reach an intelligent understanding, whereby some order may be brought out of the ruinous chaotic condition which now prevails. Too much must not be expected at once. The druggist is by training a commercial man, as the physician is a professional man, and a better relation between the two must be gradually evolved by mutual efforts.

Presentation of the Druggists' Code of Ethics.

This code represented an agreement of the Druggists of Taylorville belonging to the N. A. R. D. It embodied the following set of rules of regulation:

1. That we will not substitute, omit or supercede any drug in a physician's prescription.
2. That we will not refill any physician's

prescription unless ordered by the prescribing physician.

3. That we will not counter prescribe.

4. That we will not urge or insist upon the public using patent medicines in cases where the services of a physician are required.

Signed, M. J. Hogan, Ph. R.,

Pres. N. A. R. D., Taylorville, Ill.

Bert Bach, Ph. G.,

Secy. N. A. R. D.

A Microscopical Demonstration.

Several pathological specimens were exhibited. A number of uterine scrapings clearly defined the dividing line between cases, benign and malignant, showing the importance of a microscopical diagnosis in menorrhagia.

The necessity of examining the sputum for germs of Tuberculosis in all suspected cases, has so forcibly impressed itself upon the minds of all practicing physicians, that it should be a matter of routine.

By detecting the incipient cases and treating them as such, we are working towards the elimination of this condition.

A discussion followed all papers.

Adjourned.

CHAMPAIGN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Champaign at the Hotel Beardsley the third Thursday of each month. Membership 60.

Officers.

President.....S. S. Salisbury, Champaign
Vice-President.....W. L. Gray, Champaign
Secretary and Treasurer....Jas. S. Mason, Rantoul
Censors.....C. H. Spears, H. E. Cushing,
Champaign, and J. A. Hoffman, Pesotum.

The Champaign County Medical Society met in the parlors of the Beardsley hotel, October 13th, 1904, the president, Dr. Salisbury, in the chair. A. S. Wall acted Secretary Pro Tem. Minutes of the previous meeting had not been sent to meeting and were necessarily omitted.

The members present were: Drs. Lyons, Newcomb, Howard, Johnson, Mandeville, Cushing, Martin, Hough, Burres, Wall, Honn. Dr. Chester was a visitor. Dr. Jennie Lyons read a paper on study of Physiology and Pathology; discussed by Drs. Newcomb, Mandeville, Cushing, Howard, Burres, Wall. Dr. Chester was invited to take part in discussion also, which he accepted and gave a very interesting talk.

Cases then reported by Drs. Newcomb and Burres.

VERMILION COUNTY MEDICAL SOCIETY.

Regular meetings are held the second Monday of each month in the city hall. Danville, at 8:30 p. m. Membership 71.

Officers.

President F. N. Cloyd, Westville
Vice President S. L. Landauer, Danville
Secretary and Treasurer...C. E. Wilkinson, Danville

The regular monthly meeting of the Vermilion County Medical Society was held Monday evening, November 14th, in the City Council Chamber.

The meeting was called to order by the pres-

ident, Joseph Fairhall, after which the minutes of the last meeting were read by the Secretary and adopted as read.

Members present: Drs. J. M. Guy, R. A. Cloyd, H. F. Becker, Benjamin Gleeson, F. N. Cloyd, Joseph Fairhall, A. M. Miller, Solomon Jones, S. L. Landauer and C. E. Wilkinson.

The Board of Censors reported favorably on the names of J. B. Hundley and C. P. Hoffman of Danville and L. W. Reid of Fairmount and they were elected to membership of the Society.

The officers above were elected to hold office till the adoption of new Constitution and By-Laws which was laid over till the December meeting.

The first paper of the evening was presented by Dr. S. L. Landauer on **Chronic Pneumonia**. The subject was very ably presented, pointing out the different forms of the disease and the pathological changes. The condition resulting from syphilis is the form most relieved by treatment.

Dr. Walton opened the discussion, further discussion was deferred until after the reading of the next paper on **Broncho-Pneumonia**, which was presented by Dr. A. M. Miller.

The essayist presented the subject in a very interesting and able manner, pointing out the characteristics of pneumonic conditions in infancy and childhood and emphasized the necessity of careful examination of the little patients. In concluding the paper the most accepted treatment was given.

Dr. R. A. Cloyd opened the discussion on Dr. Miller's paper in a very practical way, laying stress on the importance of keeping up the strength of the patient. Dr. Guy and Dr. Walton followed in the discussion after which the Society adjourned to meet the second Monday evening in December.

The regular monthly meeting of the V. C. M. S. was held in the Council Chamber, Monday evening, December 12th, with the newly elected President, Dr. F. N. Cloyd, in the chair.

The minutes of the November meeting were read, and after the correction of an omission, them inutes were adopted.

Members present: F. N. Cloyd, F. W. Barton, Joseph Fairhall, H. F. Becker, H. S. Babcock, T. E. Walton, A. J. Leitzbach, S. M. Black, E. M. Smith, O. W. Michael, L. W. Reid, I. E. Huston, S. L. Landauer, H. W. Morehouse, Benj. Gleeson, A. M. Miller, Robt. McCaughey, J. W. O'Haver, J. M. Guy, M. Sahud and C. E. Wilkinson.

The Board of Censors reported favorably on the name of Dr. M. Sahud, after which he was duly elected to membership.

The first paper of the evening was very ably presented by Dr. F. W. Barton, on **Railroad Injuries and Some of Their Peculiarities**. The subject was practically presented, mentioning some of his experiences during the past year with his work as acting surgeon for the C. & E. I. R. R.

The discussion was opened by Dr. H. W. Morehouse, relating some interesting cases observed during his twenty-five or thirty years' connection with the Wabash Railroad. The

discussion then became general, in which Drs. Walton, McCaughey, Sahud and Cloyd took part, and the discussion was closed by Dr. Barton.

The second paper of the evening was by F. N. Cloyd, on **Mine Injuries**, and interesting points. The manner in which mine injuries are received was ably presented. Fracture of the pelvis is not an uncommon injury, and is usually a grave condition to deal with. The essayist stated that he had observed that lacerated wounds received in the mines healed without infection, in spite of the fact that particles of coal or stone may remain in the wound that could not be removed.

Dr. J. M. Guy opened the discussion and related some interesting cases that came under his care at the St. Elizabeth Hospital.

On account of the lateness of the hour, a special meeting was ordered to be called for December 19th, for the discussion and adoption of Constitution and By-Laws.

The meeting adjourned to meet December 19, 1904.

The special meeting of the V. C. M. S. was held Monday evening, December 19th, and the following members were present: F. N. Cloyd, Joseph Fairhall, E. M. Cooley, J. M. Guy, W. H. Paul, E. E. Clark, J. H. M. Clinch, R. A. Cloyd, G. L. Williamson, W. A. Lottman, C. P. Hoffmann, H. F. Becker, M. Sahud, J. G. Fisher and C. E. Wilkinson.

The Constitution and By-Laws were immediately taken up for discussion. The only section that elicited much discussion was the one on "Eligibility of Membership." After a free discussion by the members present, the following was adopted:

Article III.—Eligibility.

Every legally registered physician in Vermillion County, who in no way professes to adhere or give support to any exclusive dogma or school, and who is of good moral and professional standing, shall be eligible to membership.

CLINTON COUNTY MEDICAL SOCIETY.

Regular meetings are held on the first Tuesday of February, May, August and November.
Membership 18.

Officers.

President Ph. H. Leibrock
Vice President B. J. Meirinke
Secretary C. H. McMahan
Treasurer T. E. Alsop

The Clinton County Medical Society held its regular quarterly meeting in Carlyle, Wednesday, November 2, 1904, with the following members present: P. H. Leibrock, President; B. J. Meirinke, Vice-President; C. H. McMahan, Secretary; T. E. Alsop, Treasurer; C. E. Hill, R. H. Brown, W. P. Gordon, A. G. Fuller, F. G. Kuhls, Th. Gaffner, W. A. Carter.

Quite a lengthy discussion was indulged in relative to the following motion proposed at the August meeting held in Trenton:

"The Clinton County Medical Society will hereafter grant each city, town, or village,

within its jurisdiction, the privilege of regulating all contract practice, and agrees, that when a majority of the physicians of any city, town, or village do not wish to recognize contract practice, or desire to terminate existing contract work, that this society shall not countenance or approve of any physician taking up such work in that locality."

After due consideration the society passed a motion to table the matter, and also a second motion in which it expressed the opinion that a physician, in contracting for practice, was not following the high standard of medical ethics.

An interesting feature of the meeting was a set of short and terse "quiz" questions pertaining to Medicine, Surgery, and Obstetrics. Each member of the Society was allowed to draw one question at random, and was given ten minutes in which to answer it. As the questions were on subjects and cases which usually exhaust a physician's knowledge, the answers given to them, and the following discussions, were very entertaining and instructive.

Dr. Gordon again brought before the Society the child presented at the May meeting, in which there was delayed resolution of the lung following pneumonia. The child showed marked improvement.

Meeting adjourned at 4 p. m., to meet in Carlyle on the first Wednesday in February.

DECATUR MEDICAL SOCIETY.

Regular meetings are held on the fourth Tuesday of each month. Membership 60.

Officers.

President Lynn Barnes, Decatur
Secretary-Treasurer W. C. Bowers, Decatur

The Decatur Medical Society met in the Decatur Club rooms, November 22, 1904, at 8 p. m., with Dr. Clara Garber, Vice President, in the chair.

Dr. Cussins read a paper on **Puerperal Eclampsia**, in which he reported twenty-two cases, with one death. Bleeding, morphine, sweating and catharsis were relied on.

The paper was interesting, especially on account of personal experience under trying circumstances and how he overcame difficulties with the crude means at hand. All hail the country doctor who fits himself properly, intellectually and then does good work in spite, often of not having the best mean at hand. The discussion was led by Dr. J. N. Randall.

Dr. J. W. Sanders read a practical paper on penetrating wounds of the eyeball and their sequellae. The doctor stated that he thought many eyes were being removed that could be saved. He showed the case of his own son, who five years ago had his left eye cut by rusty clothes line through conjunctiva and sclera nearly three-fourths around the ball. Cleansing and seven stitches were required. The result was good, the eyesight and normal appearance of the eye being retained. Rust stains were seen along the scar.

SOUTHERN ILLINOIS MEDICAL ASSOCIATION.

Officers.

President J. W. Armstrong, Centralia
1st Vice Pres J. L. Wiggins, East St. Louis
2d Vice Pres C. C. Grizzle, De Soto
Secretary E. E. Fyke, Centralia
Asst. Secy C. W. Lillie, East St. Louis
Treasurer A. T. Telford, Olney

The thirtieth annual meeting of the Southern Illinois Medical Association convened in Elk's Hall, East St. Louis, Thursday, November 4, at ten o'clock, a. m., under the presidency of M. D. Empson, of Galatia.

After invocation by Rev. J. B. House, the roll was called by passing registration book.

Addresses of welcome on behalf of the City of East St. Louis and the East St. Louis Medical Society were made by Mayor Silas Cook and Dr. H. C. Fairbrother. Dr. J. W. Armstrong, vice president, responded on behalf of the association.

The minutes of the twenty-ninth annual meeting were read and approved.

The president appointed as censors, H. C. Mitchell, C. W. Lillie and J. L. Wiggins.

The presidential address was delivered by President M. D. Empson.

The Board of Censors reported favorably upon the applications for membership of the following named gentlemen, and they were unanimously elected to membership: A. B. Capel, Shawneetown; J. T. Williams, Broughton; O. J. Culberson, E. W. Cannady, A. B. McQuillan, H. S. Smith, H. G. Hertel, R. A. Twitchell, W. E. Wiatt, all of East St. Louis.

The following program was presented:

Umbilical Hernia with Report of Cases, H. C. Mitchell, Carbondale.

Septic Infection with Especial Reference to Treatment, J. W. Hamilton, Mt. Vernon.

Superstitions, J. W. Armstrong, Centralia.

Gonorrheal Ophthalmia in the New-Born, G. C. Adams, East St. Louis.

Abiotrophy, D. S. Booth, St. Louis, Mo.

Urine Analysis by the General Practitioner, W. A. Sim, Golconda.

Some Observations on Tuberculosis, C. W. Lillie, East St. Louis.

Appendicitis, J. L. Wiggins, East St. Louis.

Some Remarks on Head Injuries, W. S. Wiatt, East St. Louis.

Dr. J. A. Egan, Secretary of the State Board of Health, addressed the Association, detailing the work being done by the State Board. On motion, the thanks of the Association were extended to Dr. Egan for his able and interesting address.

The proposed amendment to Article Three of the Constitution, adding the words, "which shall pay the annual dues for the ensuing year," after the word "dollar" in said Article Three was, on motion, adopted.

The reports of Secretary and Treasurer were read and received.

The following officers were elected for the ensuing year: President, J. W. Armstrong,

Centralia; First Vice President, J. L. Wiggins, East St. Louis; Second Vice President, C. C. Grizzell, De Soto; Secretary, E. E. Fyke, Centralia; Assistant Secretary, C. W. Lillie, East St. Louis; Treasurer, A. T. Telford, Olney.

The Association adjourned to meet at Mt. Vernon in November, 1905.

SHELBY COUNTY MEDICAL SOCIETY.

Regular meetings held in Shelbyville the first Tuesday of each month at 7:30 p. m.

Officers.

President T. L. Catherwood Shelbyville.
Vice President T. Thompson, Shelbyville.
Secretary and Treasurer... C. L. Smith, Shelbyville.

The Shelby County Medical Society met in Dr. Eddy's office at 7:30 p. m., December 6, 1904. Minutes of previous meeting read and approved.

As meetings are not held during the summer months, considerable correspondence had accumulated which was read and disposed of.

In reference to a letter from Dr. E. E. Tyke, Councilor of the Seventh District, in regard to the State Journal, the Secretary was ordered to reply that "The Shelby County Medical Society was satisfied with the present condition of the State Journal and the way it was conducted."

The communication from the State Board of Health, informing us of the establishment of Bacteriological Laboratory for the free examination of specimens for physicians, was read, commented favorably upon and ordered spread upon the Society's records.

The Society voted to ask the veterinary surgeons, dentists and druggists of the county to become members of the Society.

Dr. Thompson was to read a paper on **Impressions Formed from Observations Upon Summer Diseases of Children**, but he was unable to be present.

Dr. Eddy was asked to prepare a paper for next meeting upon **Pneumonia**.

MORGAN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Jacksonville the second Thursday of each month.

Membership 42

Officers.

President J. W. Hairgrove
Vice President Josephine Milligan
Secretary David W. Reid
Treasurer E. T. Baker

The annual meeting of the Morgan County Medical Society was held December 8, 1904. Present, members, 16, visitors, 2.

The retiring president, Dr. F. P. Norbury read an address in which he urged the Society to greater activity and diligence, especially in the matter of preserving scientific and clinical records of work done by the members. Jacksonville has greater advantages in the way of hospitals and in some other respects than most cities of its size. He especially urged a greater use of our medical library, containing over 1,000 volumes, at present largely unused. On condi-

tion that the Society take steps to qualify for and obtain membership in the American Association of Medical Librarians, the reader personally offered a large collection of bound volumes of some of the best current medical journals, some of them complete files, as an addition to the Society library. Later, a committee was appointed to consider the question of such membership, and to report at the next meeting.

The following officers were elected for the year 1905: President, J. W. Hairgrove; Vice President, Josephine Milligan; Secretary, David W. Reid; Treasurer, E. T. Baker; Librarian, Carl E. Black; Censors, A. L. Adams, three years; F. P. Norbury, two years; Carl E. Black, one year.

Moved, That the above Board of Censors act as Board of Trustees of the Society for the coming year. Carried.

Moved, That, whereas the ordinances of our city, governing public health have not recently been revised, and have in some respects not been kept in harmony with recent scientific and sanitary progress, Resolved, that a committee of three be appointed to report to this Society such changes in our ordinances as will put them in line with sanitary and scientific progress. Carried.

Committee, Drs. Baker, Black and Baxter, motion: That the Secretary be allowed a sufficient sum to employ a stenographer to report the proceedings of each meeting, and assist him in the clerical work of the Society. Carried.

On motion, the paper of the evening, **Adolescence**, by Carl E. Black, was postponed on account of the lateness of the hour till the January meeting of the Society.

Four new members were admitted to the Society, Drs. W. P. Duncan, T. O. Hardesty, F. A. Stubblefield and A. H. Dolear. These names are not included in the last annual report of the Secretary given below.

Following are the annual reports of the Secretary and Treasurer:

Secretary's report:

Total members, Jan. 1, 1904.....48
New members since Jan. 1, 1904..... 2 50

Deceased members since Jan. 1, 1904..... 1
Names dropped, principally from withdrawal of members from adjoining counties, who have joined their local Societies11 12

Total members in good standing Dec. 8. 38

The financial part of the work of the Secretary will appear in the report of the Treasurer as hereafter, the Treasurer having consented to continue during the past year the former duties of his office, which, under the new constitution, devolves upon the Secretary, but is much more efficiently performed by the present experienced Treasurer. The receipts and the expenditures attending the mass meeting of the Sixth Councilor District in January, including the banquet at the Pacific Hotel, were accounted for by the Committee on Entertainment for that meeting, and do not appear in the

report of the Treasurer, but are recorded in the minutes of the Society.

The Society has held meetings each month during the past year, except in July and August.

The regular January meeting was involved in the above mentioned meeting of the Sixth Councilor District, embracing fourteen counties, with a banquet at night.

Another important meeting was a called meeting of the Physicians and Lawyers of the county, March 18, for supper at the Dunlap House, with exchange of views and good fellowship between the two professions.

The new constitution, under which the Society has operated the past year, brings us into close contact with State and National Society. It has reduced our apparent membership, and to some extent our real membership, as the new and more complete organization of adjoining counties has claimed some of our former members, and some members held by a rather lax tenure had to be dropped from our list, or accounted for to the State Treasurer in the payment of dues not received by this Society.

Treasurer's report:

Receipts and expenditures for the year 1904—
Total cash receipts to Dec. 16, 1904.....\$116 90
Cash at close of 1903..... 30 67

Total cash to date.....\$147 57
Expenditures—
Total expenditures to date.....\$ 58 09
Balance cash on hand..... \$ 89 48

An itemized statement will be furnished the Secretary at close of the fiscal year, December 31, 1904.

E. F. Baker, Treasurer.

SANGAMON COUNTY MEDICAL SOCIETY.

Regular meetings are held at the Lincoln Memorial Library in Springfield the second Monday of each month at 8 p. m. Membership 75.

Officers.

President W. O. Langdon, Springfield
Vice President R. D. Berry, Springfield
Secretary-Treasurer C. R. Spicer, Springfield
Directors, S. R. Hopkins, E. E. Hagler, A. O. Taylor

The Sangamon County Medical Society held its regular monthly meeting in the Lincoln Library building, Springfield, December 12, 1904.

The meeting was called to order by President Langdon at 8:30 with seventeen members and one visitor present. After the minutes of the previous meeting were read and approved the report of the retiring secretary was read and accepted. It was briefly as follows:

The Society has lost by removal from the county three members and by death one. Nine new members were elected and two paid up back dues making a total of 69 in good standing. Applications to be acted on, one. Average attendance for ten meetings, 19. Number of

members at banquet, 42. Visitors, 25. Papers read and discussed during the year, 14.

Financial report:

Balance on hand Nov. 9, 1903\$ 5 07
Amount of dues collected for 1904..... 203 50
Amount collected for banquet 28 00
\$236 57

Amount of expense by orders\$ 42 16
Dues to State Society, 65 @ \$1.50 97 50
Dues to State Society 1 @ \$1.00 1 00
Expense of banquet 73 00
To C. P. Colby for Sec. for 10 meetings.. 10 00
To C. P. Colby for stamps since last meeting 1 00

Total\$224 66

Balance on hand\$ 11 91

The application of Dr. John Prince was voted on and the election declared unanimous. The following applications were read and referred to the Board of Directors: Drs. John Deal of Riverton, M. A. Mortensen, of Springfield and G. R. Bradley of Modesto.

Dr. L. C. Taylor read the paper of the evening on the subject **Exudates in the Pleural Cavity**. A digest follows:

While the paper treated more particularly with empyema the author chose the more general subject in order to show the differential diagnosis in the several varieties of exudates in the pleural cavity. Before beginning the discussion of the subject proper the author, by means of a series of charts and explanations gave a very clear understanding of the anatomical relations involved. He then said that the fluid in the pleural cavity instead of forming a horizontal line of dullness, according to the laws of gravitation, is higher posteriorly adjoining the spinal column on either side where it descended to the side where it ascends to again descend as it passes to the anterior surface of the chest wall forming a line somewhat like the letter S. He stated that though the German schools placed little diagnostic importance on this line it was generally accepted that, in uncomplicated cases of moderate effusion, the dullness is more marked posteriorly and in the axillary line. Little aid to diagnosis is to be derived from placing the patient in different positions for if the line of dullness vary at all it will be so slowly and so slight as to be inappreciable. The signs by which the diagnosis is to be made are flatness over the area involved with diminished vocal fremitus, loss of transmission of the voice, loss of or diminished respiratory murmur or bronchial breathing.

The most frequent causes of these exudates are traumatism, tuberculosis of the pleura, typhoid fever, puerperal fever and other acute infectious diseases. The etiology, from a clinical standpoint, can be made out only by a careful study of the clinical history in each case. The direct microscopical examination of the exudate for diagnostic purposes is not to be

recommended; but cultures should be made and examined and the inoculation of guinea pigs and rabbits with the exudate will show the presence of the tubercle bacilli. Probably 25, 30% of the empyemas are tubercular. Serum more or less tinged with blood is almost diagnostic of tuberculous. Tubercular cases are rarely pure in infections. They are usually mixed with streptococcus, staphylococcus or pneumococcus infections.

A tuberculous exudate in the pleural cavity may follow an acute dry pleurisy, serofibrinous pleurisy or it may develop without any premonitory symptoms. The insidious manner of its appearance may be illustrated by the following case seen in consultation. The attending physician suspected fluid in the pleural cavity. The patient, a man of about forty, was a teamster and until within a few days previously had followed his vocation. His heart was displaced to the right by a left sided exudate. His only complaint was difficulty of breathing and when told his condition was disposed to doubt it. About a half gallon of bloody serum was withdrawn which soon reaccumulated and with fever and loss of strength the patient died in a few weeks.

An interesting instance of a traumatic pleurisy was reported in the case of a man who received a bullet wound in the left lung. Six months later he was examined by the author who found an empyema pointing in the fourth or fifth intercostal space on the left side. About a quart of pus was withdrawn and two large drainage tubes inserted. The discharge continued for several weeks without any tendency to healing when an inch of rib was resected after which the wound healed.

Two cases following typhoid fever were noted. The first developed an acute pleurisy but after a long time the exudate was absorbed. In the second the Widal reaction was positive and the pus withdrawn contained a motile bacillus which was taken to be typhoid. A case of pneumonia was reported in which there was considerable displacement of the heart and compression of the lung. Drainage was made and though the pus was removed the heart was more displaced and the respiratory difficulty greater than before while the whole lung was extremely tympanic. The author thought the pneumothorax might have been avoided by syphon drainage.

A case of either empyema or abscess of the lung following puerperal septicaemia was also noted. The case had been referred by another physician but the cicatrices showed that eight foci had been drained in various localities. An inch of the ninth rib was resected for drainage and revealed a large cavity which was filled with iodoform emulsion. A culture showed streptococcus infection.

The last case reported was a man who, about eight weeks ago, had a pneumonia. About three pints of pus were removed and was found to contain diplococci—doubtless the same that caused the pneumonia.

As to treatment the author said when the temperature was running normal or nearly so and there was but little dyspnoea it was advis-

able to wait two or three weeks hoping by tonics, laxatives and diuretics to induce absorption of the exudate. When the reverse of these conditions is present it is best to investigate the exudate and should it be purulent it should be removed. Should the exudate be found deeply tinged with blood a very guarded prognosis should be given as it is very likely tubercular. Syphon drainage has one strong feature to commend it—namely the prevention of pneumothorax. Irrigation of the pleural cavity is not to be encouraged except in putrid cases.

The paper was well received and brought out several points in the discussion. Dr. Hopkins referred to the works of Widal and Rivant who evolved the theory of cyto-diagnosis. By that method they claim they are able, by means of a microscopical examination of the cellular elements found in the pleural exudates (as well as from exudates from serous surfaces in general) to tell the kind of infection giving rise to the exudate.

Dr. Griffith recalled the especial care taken by physicians formerly to prevent the entrance of air into the pleural cavity.

Dr. Munson spoke of a case where the pus burrowed into the respiratory tract and threatened suffocation. Dr. Kreider told of a case where he injected a few drops of an emulsion of iodoform in ether into the cavity with alarming results owing to the irritation of the ether. The patient recovered. Dr. Spicer pointed out the fact that the majority of empyemas occurred in children and followed pneumonia. Also that a hemorrhagic effusion instead of being tubercular as is so in adults is often due to scurvy.

Dr. Dixon and others expressed their appreciation of the paper.

Dr. Hagler reported a rare and interesting case of vicarious menstruation, the monthly flow occurring from the conjunctivae in a girl of fourteen. After several months the normal function was established.

There being no further business the meeting closed in order.

ROCK ISLAND COUNTY MEDICAL SOCIETY

Regular meetings are held bimonthly at Rock Island on the second Tuesday. Membership 56.

Officers.

President L. L. Dunn, Moline
1st Vice Pres G. A. Wiggins, Milan
2d Vice Pres.....W. L. Ludewig, Rock Island
Secretary T. J. Lamping, Moline
Treasurer C. Whiteside, Moline
Official Reporter.....F. H. First, Rock Island

The regular meeting was held at Hotel Harms, Rock Island, on the evening of Tuesday, December 13th. Three new members were received. Dr. Hugh T. Patrick, of Chicago, gave a very interesting talk on the **Diagnosis of Hysteria**. He brought out some new and interesting points in the diagnosis of this disease. After Dr. Patrick's paper, lunch was served in the dining room.

ADAMS COUNTY MEDICAL SOCIETY.

Regular meetings held in Quincy the second Monday of each month at 2 p. m. Membership 70.

Officers.

President L. H. A. Nickerson, Quincy
 First Vice Pres John A. Koch, Quincy
 Second Vice Pres J. M. Grimes, Camp Point
 Secretary Geo. E. Rosenthal, Quincy
 Treasurer R. J. Christie, Jr., Quincy
 Censors: C. D. Center, Jos. Robbins, S. B. Ashton, Quincy.
 Delegate State Society..E. B. Montgomery, Quincy

The monthly meeting of the Adams County Medical Society was held in Quincy, at the Chamber of Commerce, December 12th, with President Nickerson in the chair.

Routine business was transacted, and Dr. W. T. Wessels, of Mendon, was elected to membership.

Those present were: Drs. Ashton, Brenner, Black, Baker, Center, Christie, Ericson, German, Gilliland, Gilbert, Hatch, Hart, Knapheide, Knapp, Montgomery, Nichols, H. J. Nichols, F. E. Nickerson, Pfeiffer, Robbins, Rosenthal, Tull, Vasen, W. W. Williams, J. J. Williams, and Zimmerman.

Carroll County Medical Society.

The physicians of Mt. Carroll invited the physicians of the county to dine, December 6, and attend the winter session of the Carroll County Medical Society.

Those present were Doctors S. C. Colehour, W. E. Clay, F. E. Miligan, Glen Mishon, H. S. Metcalf, T. I. Packard, J. E. Porter, J. W. Powers, R. B. Rice, N. Rinedollar, M. A. Sagner, J. H. Stealy, R. P. Wales, R. H. Wood.

Last May the Board of Supervisors employed certain physicians to do the county work in each locality. At the spring meeting of the Carroll County Medical Society strong objection was made to the plan, and the following resolution adopted:

Whereas, The unfortunate and worthy poor have their own choice of physician, and the latter, from decency as well as humanity, cannot turn such patients away to doctors appointed for the care of paupers. All such professional work under the new rule of the Supervisors must be done without remuneration.

The Board of Supervisors have discriminated against the physicians of the county, by refusing to pay them for services to the poor, while they pay the bills of merchants and others who furnish necessities to these people: therefore,

Resolved, That the physicians of Carroll County protest against the action of the Board of Supervisors in employing physicians to do the county's work in each locality.

Later the physicians of the City of Mt. Carroll signed an agreement not to bid for the work, and at the recent meeting of the Society a committee was appointed to get as many signatures of the physicians of the county as possible. At this time all have signed but four.

War is to be made on the "dead beats" who

call the doctor, but ignore his fee. At the meeting steps were taken to organize a Physicians' Protective Association.

An interesting program was given. Of special interest was the paper on **Why So Many Mistakes in Diagnosis of Graves Disease**, by Dr. J. H. Stealy, of Freeport.

Interest in the Society is growing.

WILLIAMSON COUNTY MEDICAL SOCIETY.

Regular Meetings are held at Marion, on the Tuesday following the 20th of each month.
 Membership 45.

Officers.

PresidentA. M. Edwards, Marion
 SecretaryD. W. Hartwell, Marion
 TreasurerL. B. Casey, Marion

At the last meeting a fee bill was adopted and signed by about thirty members.

EFFINGHAM COUNTY MEDICAL SOCIETY.

Regular meetings held on the 2d Tuesday of each month in Commercial Club rooms at Effingham. Membership 25.

Officers for 1905.

President.....J. N. Phifer, Shumway
 1st Vice-President.....J. N. Matthews, Mason
 2d Vice-President.....J. B. Walker, Effingham
 Treasurer.....F. W. Goodell, Effingham
 Secretary.....F. Buckmaster, Altamont
 Delegate to State Society..C. F. Burkhart Watson
 Alternate.....J. B. Walker, Effingham

The annual meeting of the Effingham County Medical Society was held in the Commercial Club rooms at Effingham, Dec. 13th. Meeting called at 1 P. M. by President J. B. Walker. A large attendance of members were present.

This being the annual meeting no regular program was prepared.

The Society proceeded at once to the elections of officers for the ensuing year with the result above shown. Following the election of officers the question of removal of the State Journal to Chicago, was discussed and voted on, the vote being unanimous that—considering the best interests of the profession all over the State—the journal should remain at Springfield, under its present management.

Next the question of consultation over the telephone was brought up, and discussed. The Society voted to charge from 50c up for being consulted or giving advice over telephone.

The visitors—among whom were Drs. G. N. Kreider, of Springfield; Emory Lanphear of St. Louis; J. D. Fyke of Centralia; John Akester of Farina; E. W. Brooks of St. Elmo, and J. H. Maxwell of Newton—were all invited to address the Society, which was followed by adjournment. At 8 P. M. an opera house meeting was held to which the general public were invited.

The special feature of this meeting was three public addresses as follows:

1. **American Surgery**, Dr. Emory Lanphear, St. Louis.

2. **The Great White Plague**, Dr. G. N. Kreider, Springfield.

3. **Fads in Medicine**—(dealing with quackery in its various forms), Dr. E. W. Brooks, St. Elmo.

Following this meeting the physicians and specially invited guests retired to a large banquet hall, where 75 plates were awaiting their arrival. An excellent six course dinner was served followed by a few toasts with brief responses.

One of these in the form of a poem, we give:

The New Doctor.

When the race of old doctors runs out,
And the new doctor comes with a shout,
And a jangle of new-fangled things that he brings

How the pulse of the public will prance
At the sound of his footsteps, and dance
To the song he seductively sings!

When the new doctor comes in his pride,
The dead will be sorry they died,—
In fact, they will sigh for an ache,
Or a pain to endure,
And all for the sake—for the exquisite sake—
Of a new-fashioned cure.

When they look at his pellets so pink,
And elixirs that none could resist,
They will groan in their graves, as they think
Of the beautiful drugs that they missed;—
Of the tablet that melts on the lips,
Of the tincture that sparkles and drips,
Like a wine of the south,—
Of the granule that glimmers like gold,
And the triturate softer to hold,
Than the dew of a kiss on the mouth.

Ah the dead! they will rise in revolt.
Recalling the dreadful old doses
Of snakeroot, and sulphur, and salt,
Of jalap and gamboge and malt,
That turned both their stomach's and noses;
And the blessed old doctor who lies
With his critical patients, down there,
Will wish he had only been wise,
And had worked on a section somewhere,
Or had followed a grave-digger's calling,
Instead of a thankless profession
That ended in such a mad session
Of rancorous brawling and bawling.

And yet there's a flaw in the flute,
For certain old fogies there be
Who still hold in the highest repute
The plain and old-fashioned M. D.
The quaint and congenial M. D.
Whose saddle-bags knocked at his knee,
As he jogged up the pike,
On the back of Old Mike,
Like a Knight of exalted degree.
Aye, still his dear face they can see,
And hear all his "hums" and his "haws"
As he trails down the track,

With his pack on his back,
Like a picture of old Santa Claus;—
But hush! let my raillery pause,
For a space,—let my fancy refuse
Every prompting, and mute be my muse.
Ere the faintest reflection it—cast
On our fathers, whose labors are past;

Tho' the future may flout them and scout them,
The world had been sadder without them;
Tho' they rest in their graves without glory,
Tho' they live not in song nor in story,
No prophet—no priest had a mission
More sacred, through all the dumb years,
Than that of the old-time physician,
Whose dust we bedew with our tears.
James Newton Matthews.

All then departed for their homes pronouncing the first year of the Society a grand success.

Marriages and Deaths.

Marriages.

Lincoln M. Bowman, M. D., to Mrs. Tillie Herzog, both of Alton, Ill., Nov. 24.

Charles W. Bailey, M. D., to Miss Josephine Ida Groesbeck, both of Hebron, Ill., Nov. 3.

Tully O. Hardesty, M. D., Kampsville, Ill., to Miss Kathryn Killum of Winfield, Mo., Sept. 20.

Dr. A. M. Cheney and Miss Theodosia S. Barry, daughter of Dr. E. L. H. Barry, both of Jerseyville, Nov. 9.

Edwin Warren Ryerson, M. D., to Miss Adelaide K. Hamilton, both of Chicago, December 6.

Edward Gustave Burgman, M. D., to Miss Winifred LaVelle, both of Chicago, Nov. 16.

Deaths.

C. T. Taggart, M. D., Central College of Physicians of Indianapolis, 1886, a member of the Twenty-Sixth General Assembly, died at his rooms in Sullivan, Ill., October 28, from pneumonia, after a brief illness, aged 57.

Jerome T. Whelpley, M. D., Illinois, 1887, one of the oldest physicians of southern Illinois, died at his home in Cobden, Nov. 10.

John J. Diehl, M. D., University of Giessen, Germany, 1865, a pioneer physician of Centralia, Ill., died recently at his home in that city.

Martin G. Hart, M. D., Illinois, 1883, of Chicago, died from apoplexy, at St. Luke's hospital, Chicago, Nov. 26.

Orison B. Damon, M. D., Harvard, Univ. Medical School, Boston, 1866, assistant surgeon in the Navy during the Civil War, for many years a resident of Chicago, died at his home in Normal, Ill., Nov. 18, from apoplexy, aged 67.

Chas. Manville Downs, M. D., Yale University Medical Dept. New Haven, Conn., 1883, died suddenly at his home in Chicago, Nov. 24, aged 44.

Wm. H. Warder, M. D., Rush Medical College, Chicago, 1892, fell dead on the sidewalk in front of his residence in Chicago, Dec. 12, from heart disease.

Dr. Samuel G. Weagley, of Jacksonville, died Wednesday, December 7th, after a long illness,

Ebenezer Lathrop who practiced medicine at Rock Island in the early 50's recently died in Chicago, aged 76.

Dr. J. D. Wallace, Litchfield, December 21, aged 85. Dr. Wallace had resided in Montgomery County for many years and had gained an enviable reputation for honesty and integrity.

News Notes.

The Watertown Hospital for the Insane.

The State Board of Charities recently visited the Watertown Hospital, and on December 12th the following communication was sent out from Rock Island: "More attention will be paid to curing patients in the future, according to the recommendation of Superintendent W. E. Taylor, who reports 1,129 inmates."

The North Central Illinois Medical Association.

This Association closed a three-day session at Pontiac, December 8th. The following officers were elected: Dr. William O. Ensign, of Rutland, President; Dr. J. J. Pearson, Pontiac, First Vice President; Dr. John Ross, Pontiac, Secretary. The next meeting will be held in Sterling.

Dr. A. W. McClintock has again resumed practice at Cissna Park, Iroquois Co., Ills., after spending four years in California.

Want Elgin Place.

Elgin, December 9.—Dr. Markley and Dr. McInnes, of Belvidere, and Dr. Crawford, of Rockford, are candidates for Superintendent of the Northern Illinois Hospital For the Insane. The incumbent, Dr. F. S. Whitman, is a prominent citizen of Belvidere and local politicians are of the belief that he will be reappointed. When Dr. Whitman was appointed by the late Governor Tanner, in January, 1899, to fill the vacancy caused by the death of Col. John R. Hamilton, the position was worth \$3,500 a year. Thirty-six hundred dollars is paid now.

Swindling Apothecaries.

One hundred druggists of Chicago will be prosecuted for selling adulterated drugs. Prescriptions sent out calling for pure Aristol revealing the fact that at least 20 per cent. contained no trace of that drug whatsoever. In many cases the substance palmed off was found

by Dr. J. A. Wessener to be nothing more than Fuller's Earth.

A Successful Medical Society.

One of the most successful local organizations in the United States is the Chicago Medical Society, the medical society for Cook County, and its working methods and accomplishments may be cited as examples that should be followed in other large cities. Among its good features is the weekly Bulletin, which it publishes. This contains the programs of the weekly meetings of the central body and of the monthly meetings of its branches and affiliated societies, as well as much other matter of interest. It is issued as second-class matter, and so can be published at less expense per member than could a simple postal card. The last issue is a special number, most of which has been prepared by the organization committee to call attention to those who are not members to the work the Society is doing and to the advantages of membership. Two years after the reorganization of the State Society, the Chicago Medical Society also reorganized, so that its Constitution and By-Laws conform to that of the general plan. In doing so, however, the needs of those living in the suburbs were considered, and the county, which practically means the city, was divided into eleven districts. In each of these has been organized a local branch, composed of all the members of the Society who reside in the district, on the plan long prevailing in Massachusetts.

Each of these local branches meets monthly, and some of them combine science and good fellowship at each meeting by having a smoker or lunch. An annual banquet, to which the members' wives are invited, is also held by all the branches. In fact, one of the main ideas of each district branch is to bring together physicians living in its territory, making it as much a social body as a scientific one. It is recognized that to bring together men who live in the same community, thus making them acquainted, will do away with most of the petty jealousies which are found in a community where physicians do not really know each other. These branches are supported by the central Society, and are forbidden by the Constitution to levy any tax on their members. The members are elected by the central body, and, of course, are members of the central body as well as of the branches. Membership carries with it membership in the Illinois State Medical Society, and each member receives the benefits of that membership, as well as a copy of the excellent journal that it published monthly by that organization. Besides these branches, there are the scientific sections—called "Affiliated Societies"—and including the surgical, laryngological, pathological, ophthalmological and otological, orthopedic, gynecological, and pediatric societies. Each of these is more or less independent of the main body, but its membership is limited to those who belong to the Chicago Medical Society. The members are supplied also with a medical directory of Cook County, and—to some the most important

point of all—have a medical defense organization of their own, managed by a medical defense committee. For all this each member pays an annual due of \$5, \$1 of which goes to the medical defense and \$1.50 for State Society dues.

The Society is also doing good work in carrying on a series of free public lectures. The membership has reached nearly 1,600, and is steadily growing, the bulletin before us indicating that there are fifty applicants awaiting action. Only seven State Societies now have a larger membership. The central body meets weekly, and it is not unusual to have an attendance of 300 or 400.

It thus seems to us worth emphasizing that the Chicago Medical Society is an example for other large cities to follow. Philadelphia is doing something in the way of Branch Societies, but it has not taken up the work systematically as has Chicago. Pittsburg, if we may judge from a recent letter from the Secretary of the Alleghany Medical Society, has also considered the advisability of adopting some such plan. What a magnificent thing it would be for New York, for instance, if the members there could come together and organize as have the physicians of Chicago.—*Journal A. M. A.*, Dec. 10, 1904.

Aesculapian Medical Society.

The Aesculapian Society of the Wabash Valley concluded its fifty-eighth annual session in Paris, Ill., on October 28th, 100 physicians being in attendance. A sensation was sprung in a resolution providing that certain members who have received newspaper notices of successful surgical operations be required to appear before the board of censors at the semi-annual meeting in May to show cause why they should not be expelled for violation of the code of ethics. Papers were read and discussed. See this and succeeding issues of the *Illinois Medical Journals*.

CHICAGO'S HEALTH.

The Health Commissioner explains the remarkably low death rate of the year up to December, as follows:

An equable temperature—about four degrees warmer than the average of 33 years; the driest November on record—less than one-third of an inch, or only about one-eighth the normal rainfall; the purest water supply—averaging 99 per cent "safe" during sixty days, are the principal factors of the lowest November death rate in the history of the city.

The total 1901 deaths from all causes, are 223 fewer, and the annual death rate per 1,000 of the population is 12.9 per cent lower than the average since 1893.

Between now and the end of the year the death rate will, of course, increase; but even with a December mortality equal to that of last year—swollen as that was by the theater

tragedy to the unparalleled total of 2,915—the yearly rate cannot exceed 14 per thousand of the population of 1,932,315, fixed by the United States Bureau of the Census.

Pneumonia is much less prevalent and less fatal this year than usual. During the first eleven months of 1903 there were 4,133 deaths from the disease. During the similar period this year only 3,690 pneumonia deaths occurred. In November, 1903, there were 333 deaths and last month only 260 from pneumonia.

The present Chicago proportion of pneumonia deaths to deaths from all causes is 13.6 per cent; from consumption it is 11.3 per cent. The corresponding figures for New York, at the close of office hours December 3, were 11.5 per cent for consumption and 17 per cent for pneumonia.

Coroner John E. Traeger of Cook County in his report for the year ending November 30, summarized the important work of his office.

1. Protection by legislation of the thousands taking advantage of low rates on railroads and boats to go on picnics and excursions.

2. That the city council and the county board enact laws to prevent the carrying of concealed weapons, "the cause of most of the crime in this community."

3. Grade crossings, especially in Roseland, Kensington, and Pullman, should be done away with.

4. Overcrowding and wretched service is the cause of most street car accidents.

5. Sale of giant firecrackers should be suppressed.

The total number of deaths investigated during the year was 5,960 and 3,821 inquests were held.

In causes of death fire heads the list with the Iroquois loss of 575 lives. There were 426 suicides, and 382 met death in railroad accidents. Of the suicides 103 were between 40 and 50 years of age.

Insane and Paupers.

The annual report of the detention hospital shows that the total number of patients admitted during the year was 1,604.

Supt. Podstata of the Dunning institutions reports that the improvements in the way of new buildings have been of inestimable benefit; that the farm has realized substantial revenues and many novel features provided for the patients. The average daily number in the insane department has been 1,780, and at the poorhouse 1,160. The total cost of maintenance has been \$376,442.

County Hospital.

Warden Happel of the county hospital reports that valuable additions in the way of service and buildings have been provided. During the year 22,301 patients have been treated. The total cost of maintenance was \$329,268.96.

Town For All Outcasts.

Separate villages in every State for imbeciles, epileptics, incurable criminals, inebriates and the insane were advocated by Alexander Johnson, General Secretary of the National Society of Charities and Corrections, who spoke recently before the members of the Arche Club of Chicago.

"In these villages," the speaker explained, "the inhabitants should be given all but two things—the elections and the joys and sorrows of married life. Let them have their theaters, their stores, their farms, their industrial plants—everything that we have except marriage and the ballot box. Then do not only clothe them and feed them, but teach them and govern them. Such a plan carried out, will do much to rebuild the American race.

"In Illinois alone there are 6,000 imbeciles and 3,00 or 4,000 epileptics. They should be cared for by the State. They are the least sinful and the most sinned against of any class of the unfortunates. As we are now treating them they are also the greatest menace to the body politic."

Mr. Johnson declared that the insane are cared for because they are feared, whereas the feeble minded and the epileptics are neglected because they are despised. He urged that the feeble minded are a greater menace to the State than the insane.

"Defense" Company Is Sued.

Methods of the Physicians' Defense Company, which is alleged to insure Chicago physicians against damages in suits growing out of their practice, may be bared in court soon. The company was attacked in court recently by the State Insurance Superintendent as violating the State insurance laws, and an injunction was asked to restrain the concern from issuing further policies in Illinois. Examiners for the insurance department are said to have found it impossible to examine the books of the company, which is said to have failed to secure a license to do business in Illinois. Its headquarters are in Fort Wayne, Ind.

Chicago Homeos Dissatisfied.

The homeopathic physicians of Chicago are not satisfied with their representation on the consulting staff of the county hospital, and President Brundage of the county board will receive a copy of the following resolution, which was adopted at the meeting of the Homeopathic Medical society December 21st.

Resolved, That the representation of the homeopathic physicians on the staff of the Cook county hospital follow the general rule of representation according to taxation. Inasmuch as one-fifth of the physicians in Cook county are of the homeopathic school, we request that their representation on the consulting and attending staffs of the Cook county hospital be in this proportion.

The present consulting staff, as appointed by President Brundage under the advice of Dr. Charles Henrotin and Dr. Franklin Billings, consists of twenty-five physicians, twenty-one being allopaths, two eclectic, and two homeopaths. It is argued by the latter that they should be represented by at least five.

FOR SALE—One Birtman sixteen-plate Static Machine with all accessories, Crookes Tuhe, fluroscope, not much used, price \$75. Address, O. E. G., care Ill. Med. Journal.

FOR SALE—One eight-plate Wagner Static Machine with complete X-Ray outfit and all other accessories and motor, used only a few months; whole outfit cost \$405 and in perfect condition. Price \$175. Address W. E. F., care Ill. Med. Journal.

FOR SALE—One Wagner eight-glass plate Static Machine in good working order \$75, one direct current motor, 1/3 horse-power, \$20. Address A. B. care Ill. Med. Journal.

FOR RENT—Doctor's office hours morning or afternoon after May 1st, 1905. Apply to Dr. W. A. Fisher, suite 907, 103 State St., Chicago.

Treatment For Obesity.

Patient—"But your treatment for obesity is so expensive."

Doctor—"Madam, that is one of its strong points. You get worrying about the expense, and it helps to work off the superfluous flesh."—Smart Set.

Does Not Refer to Illinois State Board of Health.

Uncle Josh—"Most every official that amounts to anything has to file an annual report."

Uncle Hiram—"Yes; and I guess that's about all some of 'em do."—Puck.

Remorse.

Dr. Cutts—"I made an awful mistake when I diagnosed that man's case as appendicitis."

Dr. Slash—"What did the operation disclose?"

Dr. Cutts—"That he didn't have a cent."—Cleveland Leader.

Doctor's Orders.

Boil the basket, made of willow,

Boil the blanket, boil the pillow,

Boil the booties, boil the hood,

Boil the spoon and boil the food,

Boil the nurse; 'tis safer, maybe;

And don't for get to boil the baby.

—Newark News.

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GRANULAR EFFERVESCENT SALT - CYSTOGEN

*An Anti-Uric Aperient and Urinary Antiseptic,
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An effective prophylactic in all febrile conditions, particularly scarlet fever, diphtheria, typhoid and other infectious diseases accompanied by high temperature and retarding the activity of the kidneys. Stimulates excretion of urine and flushes the entire urinary tract with a dilute solution of formaldehyd, thus rendering the urine sterile. Inhibits the growth of pyogenic bacteria and prevents decomposition of urine.

Prevents formation of uric acid accumulations and dissolves concretions in their incipency.

CYSTOGEN APERIENT is particularly valuable in Gout, Rheumatism, Calculus, Cystitis, Gonorrhœa and all Infectious Fevers.

Dose: A heaping teaspoonful in water three or four times daily.

*Samples and literature will be furnished on
request of physicians.*

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HIGHLAND BRAND EVAPORATED CREAM

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The Illinois Medical Journal.

EDITORIAL OFFICE, 522 CAPITOL AVENUE, SPRINGFIELD.

Copy for advertisements must reach the editor's office by the 20th of the month in order to secure insertion.

PUBLISHER'S NOTES.

The Journal is not responsible for any medical or therapeutical views expressed in this department.

An Old Remedy Combined With a Newer One.

The Massachusetts Medical Journal recently published the following, which will no doubt be interesting to our readers:

"We believe that members of the medical profession should familiarize themselves with the combination tablet of antikamnia & heroin. The first of these, antikamnia, years ago, established a prominent place for itself as a most reliable antipyretic, antineuralgic, and general pain reliever, while heroin is, by all odds, the most efficient of recent additions to our list of remedies. The advantages of this combination are fully illustrated by a report of cases submitted to us by Dr. Uriel S. Boone, Professor of Surgery and Pharmacology, College of Physicians and Surgeons, St. Louis. We reprint three of said cases, as each has some particular feature which successfully called into use in a most beneficial manner, the synergetic action of these two drugs.

"Case I. J. P., athlete. Suffering from an acute cold. On examination found temperature 101° with a cough and bronchial rales. Patient complained of pain induced by constant coughing. Prescribed antikamnia and heroin tablets, one every four hours. After taking six tablets, the cough was entirely relieved. Patient continued taking one tablet three times daily for three days, when he ceased taking them and there has been no return of the cough or pain.

"Case II. Ed. H., age 30. Family history—hereditary consumption. Hemorrhage from lungs eighteen months ago. His physician had me examine sputum; found tubercle bacilli. After prescribing various remedies with very little improvement, I placed him on antikamnia and heroin tablets, prescribing one tablet three times a day and one on retiring. He has since thanked me for saving him many sleepless nights and while I am aware he never can be cured, relief has been to him a great pleasure and one which he has not been able to get heretofore.

"Case III. Wm. S., aged 28. Lost 20 pounds in last 30 days. Consulted me July 9th. I thought he most certainly would fall victim to tuberculosis. Evening temperature 101° with night-sweats and a very troublesome cough with lancinating pains. Prescribed 1-100 gr. atropine to relieve the excessive night-sweats and one antikamnia and heroin tablet every four hours, with the result that he has entirely recovered and is now at work as usual.

"Neither in these, nor in any other of my cases, were any untoward after-effects evi-

denced, thus showing a new and distinctive synergetic action and one which cannot help being beneficial."

Salithia.

Magnesium sulphate has long been recognized as the most efficient of the Saline cathartics. Modern methods of treatment demand the establishment of a clean and empty alimentary canal *primae viae* and this obtained it is easy to affect the system as may be desired. Salithia is a combination of magnesium sulphate lithium and colchicine in effervescent form. It is the "twin" of Saline Laxative (Abbott) which has become a standard remedy with the profession. The formula was particularly designed to relieve the system of uric acid and at the same time to exert a decided chologogue action. In all diseases of the uric acid type Salithia should be given in dram doses once or twice daily (preferably largely diluted with hot water) and if it is given on an empty stomach early in the morning its effect is apparent in two hours. Hepatic activity is secured and a normal condition of the urine follows in a few days. In using Salithia in Gout, Rheumatism or Lithemia it is well to exhibit conjointly Calcalith (calcium carbonate comp.) in ten-grain doses three times daily. If you have not yet used these two remarkable remedies you should do so. They are "reputation makers" and that means money makers, of course. Literature and samples will be sent free; as well as a free copy of Abbott's Alkaloidal Digest, a 300 page book of brief therapeutics and practice, by addressing The Abbott Alkaloidal Co., Ravenswood, Chicago, Illinois.

Calcidin.

Despite the text-books it is generally allowed that there is a distinct membranous croup and a diphtheritic croup. In the latter there is a profound systemic toxemia; in the former the local symptoms are the main consideration. One is a catarrhal disorder, the other a specific disease due to the presence in the system of the Klebs-Loeffler bacillus. In croup of the catarrhal type, calcium iodized (Calcidin) has proven itself to be practically specific. In diphtheritic croup it is, however, only a useful adjunct to other treatment. If membrane forms and there is no profound systemic disturbance; if the temperature does not rise and the disorder has distinct catarrhal form, then Calcidin in doses of gr. 1-3 every one-fourth to one-half or one hour will do prompt work.

THE PRESBYTERIAN HOSPITAL OF CHICAGO

IS OFFERING POST-GRADUATE
WORK TO NURSES.

In addition to the practical experience offered in the wards of the hospital class instructions will be given. Lectures will be delivered by the members of the staff of the Rush Medical College.

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Telephone: Central 2523.

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REFERENCES: Any reputable physician or business man of Hot Springs.

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Louisiana
Purchase
Exposition.

Listerine Dermatic Soap

An Antiseptic Detergent for use in the
Antiseptic Treatment of Diseases
of the Skin.

LISTERINE "Dermatic" Soap contains the essential antiseptic constituents of eucalyptus (1%), mentha, gaultheria and thyme (ea. $\frac{1}{2}\%$), which enter into the composition of the well-known antiseptic preparation, Listerine, while the quality of excellence of the soap-stock employed as the vehicle for this medication, will be readily apparent when used upon the most delicate skin, and upon the scalp. Listerine "Dermatic" Soap contains no animal fats, and none but the very best vegetable oils; after its manufacture, and before it is "milled" and pressed into cakes a high percentage of an emollient oil is incorporated with the soap, and the smooth, elastic condition of the skin secured by using Listerine "Dermatic" Soap is largely due to the presence of this ingredient. Unusual care is exercised in the preparation of Listerine "Dermatic" Soap, and as the antiseptic constituents of Listerine are added to the soap after it has received its surplus of unsaponified emollient oil, they retain their peculiar antiseptic virtues and fragrance.

A sample of Listerine Dermatic Soap may be had upon application to the Manufacturers—

Lambert Pharmacal Co.
St. Louis, U. S. A.

Awarded
GOLD MEDAL
Louisiana
Purchase
Exposition.

Give it powdered on the tongue and follow with a few swallows of hot water, or make a fresh solution for each dose, or every few doses. The same directions apply to simple croup but here the remedy should be pushed at the first sign of "crouping," and it will be found to be promptly abortive. If there be any possibility of diphtheritic infection antitoxin should be used promptly. Calceidin is the remedy par excellence for bronchial disorders and moreover wherever iodine is indicated internally it is the best form of the drug we possess, as it never causes iodism. Literature and samples of Calceidin will be sent on request to the Abbott Alkaloidal Co., Ravenswood, Chicago, Illinois.

The Nursing Sister, a manual for candidates and novices in questions and answers, etc. prepared for St. John's Hospital and Training School by Rev. L. Hinssen, Springfield, Ill., 1905, H. W. Rokker Co., Printers and Binders. Price \$2.00.

In 1899, Rev. Father Hinssen, director of St. John's Hospital, Springfield, prepared this book for the community of St. Francis which has in America some seventeen hospitals containing about 700 beds and served by about 200 nursing sisters. The work proved valuable not only for them but has been enthusiastically received by every other nursing order not only in America but in England and all continental countries as well as in Australia and the other antipodes.

The instruction is given in the form of questions and answers and is so simple and comprehensive, proceeding in such a logical way that any person of average intelligence by simply studying the work thoroughly may secure an excellent idea of the essentials of nursing.

We commend it to medical men and suggest that it would be an excellent work to introduce into every hospital in the State.

A New Therapeutic Agent of Value in the Treatment of Epilepsy, With the Report Of a Case.

Hugo Erichsen, M. D., L. R. C. P. and S., reports an interesting case in the Medical Age, for September 25, 1904. The author says:

"The patient had had nineteen well defined attacks of epilepsy since the summer of 1900. Shortly after the occurrence of the last I took charge of his case. Up to that time he had been taking the bromides at irregular intervals, owing to the fact that his stomach was easily deranged. Eventually they had to be rejected. Even bromide of sodium proved objectionable for this reason.

"About this time my attention was directed to "Brometone." It proved to be the very thing I was looking for, as the patient had no difficulty in retaining it and it did not give rise to untoward after-effects. After taking what was evidently an overdose the patient experienced drowsiness during the day, but when the

dose was reduced to 5 grains (in capsules) three or four times a day he had no further trouble in this respect.

"Brometone contains about 77 per cent of bromine, and possesses the sedative and other characteristic effects of that agent. It is preferable to the bromides, because it does not excite nausea, vomiting, or alimentary disturbance. Moreover, it does not seem to produce the undesirable systemic depression often resulting from the older bromides. Although my patient has been taking Brometone day after day for over a year, he has not been afflicted with skin rashes or any other indications of bromism. Furthermore, he has not had an attack for sixteen months, has gained in weight, improved in appearance, and takes a more cheerful view of the future.

"From my experience with it I am inclined to believe that Brometone will prove of service in the treatment of other nervous conditions, particularly insomnia, headache, and delirium tremens. It may also prove of benefit in some cases of asthma and may relieve cough of reflex nervous origin."

Aspiration and Injection of Morphin-Eucain in Tetanus.

By Prof. John B. Murphy, Chicago.

(Abstracted from Journal of the American Medical Ass't., Aug. 13, 1904.)

A patient treated eight days after infection was given three full doses of anti-tetanic serum, but without effect; the convulsions increased and were almost continuous. Thereupon a lumbar puncture was made and 16 cc. of cerebrospinal fluid withdrawn. At the same time 3 cc. of the following was injected:

Beta-Eucain	1½ grains
Morphin sulphate	1/3 "
Sodium chloride	3 "
Dist. water	3½ ozs.

This had been sterilized by boiling. The patient slept four hours immediately and through the night 1½ hours at a time. There were only 8 spasms in the succeeding 24 hours. A more severe spasm recurring the next morning, another puncture was made, 15 cc. of fluid withdrawn, and 4 cc. of the above injected. This was repeated on the two following days and then, with intervals of two days, two more aspirations and injections were made. He was discharged as cured 10 days later.

The quantities of morphin and eucain used were exceedingly small as this was the writer's first case. There was no sweating, headache or collapse, symptoms frequently noticed after lumbar injection of cocain. He believes the eucain should be increased to 1/6 to 1/3 grain at each injection, and this treatment might be made more frequent. Eucain is much safer than cocain, as it admits of boiling and there is less idiosyncrasy to intoxication. Reduction of the spasms prevents death from exhaustion

For WINTER COUGHS—the stubborn kind—whether of bronchitis, phthisis or laryngitis—whether acute or chronic—whether in adults or children—the best remedy is

Angier's Petroleum Emulsion

Expectoration becomes more free, pulmonary congestion is relieved, respiration is made easier, the troublesome cough is checked.

Samples only upon request.

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DR. BROUGHTON'S SANITARIUM.

For the care of Special Nervous Cases, Opium, other Drug Addictions including Alcoholic.



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or interference with respiration. The diminution of pus in the aspired fluid would lead one to believe that lessening of pressure aided the fluid in overcoming infection. There is no reason why the cerebrospinal cavities cannot be washed out by salt or other neutralizing solutions.

The Respiratory Link.

The truth of the old adage that a "chain is only as strong as its weakest link" is forcibly illustrated in medicine. The construction of a patient may in most of its relations be normal; yet the chain of health is impaired by one function which is the seat of more or less constantly recurring disturbances.

The most frequent form of this weak physiologic link that confronts the physician is that manifested by the patient who, with the advent of winter, suffers from repeated congestions and inflammations of the respiratory organs. It may be that at all other times of the year the individual is, as far as indications go, in a good state of general health; it is, however, more commonly the case that the skilled diagnostician is able to recognize an impairment of constitutional vigor, which is in reality the cause of the respiratory disturbances. Present-day scientific teaching emphasizes that it is unwise to treat these patients with expectorants, cough syrups and respiratory sedatives; these latter remedies are at the best but palliative and do not reach the cause of the disturbance. It is more rational to endeavor to strengthen this weak respiratory link by restoring its integrity, and the proper way to do this is by treatment directed to the real causative factor, which is an atonic condition of the system.

The experience of many years has taught that these constantly recurring respiratory disturbances may nearly always be prevented or at least reduced in frequency and severity if Gray's Glycerine Tonic Comp. is administered throughout the winter. If, however, this precaution has not been observed and the patient is already suffering from his regular winter cough and bronchial or pulmonary distress, treatment with Gray's Tonic is still the most efficient.

The manner of the action of the remedy in these cases is two-fold: first of all it overcomes malnutrition by stimulating the torpid nutritive functions to assume normal activity; as a consequence the patient's constitutional

vigor is strengthened and incidentally the relaxed atonic condition of the respiratory mucous membrane is eradicated.

The second effect of Gray's Tonic in these cases is upon the local disturbances of the respiratory mucous membrane—first as a direct antiphlogistic and tonic influence upon the disordered circulation; it thereby relieves engorgement and restores tone to the relaxed blood vessels.

Gray's Tonic is to be preferred in the management of these acute and chronic respiratory conditions, because it gives the patient RELIEF from the very start and if persisted in, overcomes the condition completely. It strengthens not only the weak respiratory link but also the entire chain of constitutional vigor.

SEEKS AN ILLINOIS DOCTOR.

Ambassador Clayton Asks Extradition of Fugitive on Murder Charge.

City of Mexico, Jan. 10.—The United States ambassador, General Powell Clayton, has presented to the foreign office of the Mexican government a solicitation in the name of his own government for the arrest and extradition of an American citizen, Dr. Benjamin F. Slusher, on the charge of homicide. Doctor Slusher resided in Decatur, Ill., and there had a high reputation and an excellent practice. The charge which is hanging over his head is in connection with the death of a young married woman in Macon county.

Dr. Slusher, it is stated, came to Mexico and secured employment with one of the leading railway companies, but left that position for other work. A sum of \$100 in gold has been offered for any information that may lead to the knowledge of his present whereabouts.

Physicians Couldn't Wed.

There once was a time when doctors were doomed to celibacy. It was at the conclusion of the medieval period when medicine was in the hands of the monks. In France, the British Medical Journal recalls, the habit of celibacy persisted long after the practice of medicine had passed into lay hands. For two or three centuries the doctors protested, but in vain. The matter was finally laid before the pope, and towards the end of the fifteenth century the vow was abolished.

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THE REWARD OF THE PROFESSION.

Abstract of an Address given before the North Central
Illinois Medical Association December, 6, 1904.

BY BAYARD HOLMES, M. D., CHICAGO.

In the introduction to his *Comedie Humaine* Balzac compares the study of the different sorts of humanity to the study of the different species of animals, which in his time had just begun to attract attention. Thus, he insists that the farmer, the merchant, the priest, the lawyer, the navigator, the public officer, the nurse, the housewife, the washerwoman, the courtesan, differ as widely from one another as the tiger, the lion, the lynx, the elephant, the deer, the crocodile, and the boaconstrictor, and that these differences are even more marked because the manifestations of any man may be infinitely modified by the social family life which may result by his union with the female of one of the other groups. If he is himself a bear-like man, his life will be quite different is he married to a tiger or to a crocodile-like woman.

We learn from Balzac that the ethics, the philosophy and the emoluments of each social group are as different from each other as, even more different than, the life of the tiger in the jungle is different from the life of the hog in the sty. It is easy to multiply examples which show the effect of environment upon the philosophy and the ethics of any social group. Let us take for example the bankers. These highly specialized members of society are much devoted to figures, to times and seasons, to small but sure per centages. With them the greatest crime is a failure to meet a date, and although the material which they handle is largely without use value, exchange value is uppermost in their philosophy. Their principal question is "How much would it bring?" As

for human sentiment, human misery or happiness, human love or hate, human growth or starvation, these are matters of which they take no account. They look upon themselves and their occupations as unchangeable, inexorable and infallible.

How different is the philosophy of the farmer. He possesses a piece of earth. To him it is a God-given possession and a title of nobility. He scatters upon his land in the sure confidence that rain and sunshine will bring him returns, not in small per centages, but in hundred or thousand fold. Nowhere else is there such individual and isolated independence. Until the days of modern specialization the farm was a kingdom in itself. Well do I remember that independence on my father's farm, where we raised every domestic animal and every farm product. We built our wagons and sleighs; we constructed our own farm buildings, the tubs for our butter, and the barrels for our maple syrup. Out of the tanned hides of our own animals we made harnesses to put on their backs and boots and shoes for our feet. Out of the wool and flax from our farm we made our own clothes and furnished our beds. The farmer sees in the products of his soil not only the fluctuating exchange value which the banker recognizes in his money, but a use value, which is constant and unchangeable. He sells his grain or his cattle with the full assurance that he is conveying something quite as valuable to human life and happiness as the machinery, clothing or furniture which he gets in return.

The priest stands in a position far removed from the banker or the farmer. He deals in intangible sentiments alone; he receives the burden of human hope, aspiration, agony, despair and terror, and by the machinations of his philosophy turns them into resignation, ecstasy, self-restraint and hope. He sees and feels the use value of the intangible

sentiments of mankind, and he alone of all the social units secures an exchange value from them in the market place of human life.

In the social menagerie no one occupies so enviable and conspicuous a place from the standpoint of usefulness and possible happiness as the good doctor. Without despising the use value of the intangible and unexploited sentiments of mankind, he renders a personal service often of the most inestimable value. His position is one which grows more and more intimate with the life of each and every social group. In his collective influence, by means of societies, legislative committees and advisory boards, the good doctor has added more to the efficiency of human life and the possibilities of human happiness than any other social group, not excepting the great army of mechanical engineers and inventors. If the latter group has increased the efficiency of human energy by enslaving the very vitals of the earth, its coal and oil, its lakes, rivers and springs, the medical profession has removed from civilized life the terror of smallpox, which formerly destroyed one in fourteen out of each community, and defaced and disfigured, crippled and diseased, three-fourths of the remainder; it has stayed the ravages of typhoid and malaria; it has corralled and may yet destroy the dreaded yellow fever; it has overcome the terror of diphtheria, and marked out the dangers and limitations and possibilities of a successful warfare on the great White Plague, Tuberculosis. It has robbed injuries, gunshot wounds and operation wounds of the dangers of blood poisoning, and has even added some humanity and comfort to inhuman war. It has made the cosmetic and hygienic offices of the dentist possible, and has robbed childbirth and the operating room of most of their agonies. These great contributions to human resources and happiness are the product of less than a hundred and fifty years of professional, scientific activity, and yet the end is not in sight. There stands before the good doctor, whether in the inspiring surroundings of the largest communities, or in the isolated quiet of a rural district, so conducive to concentra-

tion and intensity of purpose, problems without number which he may solve, which he must solve, for the advancement of civilization and the peace of his own mind and soul.

In modern civilized life there is only one unpardonable sin, and that is economic insufficiency. However useful a man may be, however successful in rendering a service inestimable and uneritizable to any number of the community in which he lives, if he fails to pay his taxes, his rent, his grocer, or his tailor, he has committed the unpardonable economic sin. Hence it follows that the compensation of the doctor is a matter of vital importance, not only to him, but to the community that requires his services. We often hear of a railroad which goes to work to build up a traffic. It does this by furnishing a service out of all proportion to the absolute requirements of the community to which it looks. A railroad is run into an uninhabited prairie; it puts sixty trains a day through the sparsely settled suburbs of a city, but eventually it reaps its reward from apparently exorbitant rates for its long-delayed traffic. It is something so with the equipment of the good doctor. He must spend the longest period of tutelage, and must undertake the most expensive system and method of education. Four years in the college, two years in the hospital, and an equal period in the service of a master or in travel abroad, gives today only the average equipment. By this long period of preparation and tutelage the time of possible service is shortened, and the possibilities of financial returns diminished. How necessary, therefore, that the fees of the doctor be made proportionately compensatory. It is for the interest of the community that the doctor be paid, well paid, and promptly paid. It is for the interest of the community that he be a man maintaining the highest standard of professional and social life; he must not scrimp for equipment, books, and professional travel; he must not be hampered by conforming to the precedent of his unskilled and untrained predecessors and contemporaries. As the banker, the merchant and the lawyer sets from time to time a different estimate upon his services, so may

the doctor estimate the honorarium which he believes himself entitled to receive.

This proposition might be illustrated by the difference in method of the doctor of today and of our immediate predecessors; by the examining room of the doctor of today and our immediate predecessors. I remember the method of old Doctor Whitney in my boyhood days. I had scarlet fever, and stayed at his house for several weeks in my convalescence. He felt his patient's pulse, looked at the tongue and eye, rubbed his hand over his clothes covering the affected part, and pulled out his saddle-bags and emptied white, yellow, green or black powders upon a row of little papers spread out before him. He was brief, silent, mysterious, insinuating and expeditious. He lived in one of the best houses in the village, and was a sturdy, healthy, cleanly and inscrutable man. His patients loved him, feared him, and paid him. They waited on his front porch until he took them into his narrow, aromatic and cheerless office.

The doctor of today is a simple, straightforward and considerate man. He has extensive, commodious, and thoroughly equipped examining and treatment rooms. His own experience is so limited in his own mind, that he has a growing and extensive library and the files of current medical literature. To these he goes in the midst, perhaps, of a clinical examination. When the patient complains of a discomfort or ill, he makes it the basis of a series of hypotheses, the refutation or confirmation of which requires a careful examination of practically every organ and function of the body. In this examination he must call to his aid the chemical laboratory, the microscope, and the methods of bacteriology and physiological chemistry. A satisfactory examination requires the assistance of one or two helpers, a dozen instruments, and several hours of time. Suppose the patient has a colic and a persistent abdominal soreness, with indigestion, the examination which is necessary may consume two or three days. The possibilities of the case are many and serious, and the examination will include the demonstration of the health of the nose and all its

sinuses, the middle ear and its connections, the tonsils and the alveoli, the heart and lungs, and practically every secreting organ in the abdomen. For the examination of the ear and the frontal and nasal sinuses a complicated and expensive apparatus is necessary, with electrical illumination. For the examination of the tonsil and the gums simple instruments and bacteriologic cultures are frequently required. For the examination of the stomach a special apparatus, the stomach tube, and simple or complicated physical and chemical equipment is necessary. For the examination of the urine and blood the equipment may be either simple when there are few evidences of disease, or expensive and complicated when the differentiation between closely related pathologic conditions is necessary. The immediate physical examination of the patient requires large experience, extensive reading, and the absolute relinquishment of the patient to the needs of the examination. The doctor's inspection and palpation must be untrammelled by the patient's clothes or false modesty. The result of these examinations is sometimes positive and sometimes indecisive. It may require weeks and months, or the examination of the patient at a more favorable period in the course of the disease, in order to make the theory of its origin irrefutable. The treatment of the disease after an absolute diagnosis has been made is generally simple, straight-forward and effective. In the example proposed the physician may have discovered its origin in lead poisoning, and the source of the lead in the beer vat, the coffee pot, or the cosmetics on the patient's face. He may have discovered an ulcer of the stomach, and its origin in the diet and habits of the patient. He may have demonstrated the source of the disease in a gall-stone or in a deformed appendix, and then but one remedy can be suggested, and that is the surgical removal of the offending element. He may have found a calculus in a kidney or ureter, or an abscess in one of the calices or in the pelvis of the kidney. He may, God save the mark, have demonstrated the presence of a carcinoma in the pylorus. In any case, whatever the good doctor has done he

has done simply, openly and by a method which may be repeated *ad infinitum*.

The country is full of unhappy people who are suffering from a failure of some good doctor to make an exclusive and irrefutable diagnosis. Is it a wonder that they seek the consolations of quackery and the delusions of Christian Science or the distractions of a bone-breaking osteopathy or fancies Dowieism? These unhappy sufferers are willing to pay a dollar a bottle for highly lauded cure-alls, or ten cents a dose for pain-relieving placebos. They will consult the physician for miles about who has the most crowded consulting room, forgetful of the fact that the more certain and prompt the cure, the fewer the waiting patients. They seek cheap doctors, who charge fifty cents or a dollar for a consultation, and give a modicum of time and intelligence dear at half the price. At these free-lunch counters of scientific lore the patient frequently tastes the hardtack and herring which arouses a demand for a professional meal. The unfortunate patient is the victim of his own parsimony. The cheap doctor discovers the possibilities of a graft; the patient is hurried to a consultant; the consultant's fees are extravagantly large; he operates upon his entangled victim, and by the fee-splitting process the cheap doctor gets a shark-like taste of blood.

From this time on the fifty cent or dollar doctor goes on a still hunt for five hundred dollar operations and an equally still hunt for consultants who are willing to pay an increasing per centage as commission or assistant's fees. Through the pressure of the public for cheap consultations and cheap visits the cheap doctor abandons the ethical standards which have prevailed in medicine since the time it emerged as a social unit and placed itself in the lead of the three great professions, and drops to the ethics of the merchant, the real estate agent and the lightning-rod man. He is as far from the ethics of the medical profession as the private fire department, which magnifies its services by encouraging conflagrations in barns, out-houses and deserted buildings in order to cultivate business and secure per centages

on the number of fires and the amount of hosepipes strung on the ground, is from the properly sustained department.

The methods of these medical tradesmen is like those of the heathen Chinese, except that too often their tricks are not vain. The wily trickster entangles his patient with soft words and fulsome laudation of his proposed consultant. He magnifies his intimacy, his influence and his pull with the great doctor; he will get a consultation or an operation at a great reduction, but it must be managed carefully; the patient must be very discreet and leave all the management of the financial affairs in his hands. When he goes to the proposed consultant he tells a very different story. The patient is very poor, he has taken care of the unfortunate family without compensation for months and years; he now sees an opportunity of getting a little money for this serious and dangerous operation. Of course it's a matter of little account to the consultant; can he not make a very moderate fee? Fifty or a hundred dollars? He will gladly collect it and attend to the after treatment. The bargain is struck; the patient is operated; he pays the five hundred dollars, and the consultant and operator receive the hundred. In order to impress the patient with the power and possibilities of the local doctor at court, the consultant is asked kindly to receipt for \$500.00. If he fails to see the hook, and is anxious to please, he sometimes does this. Great doctors are such poor business men.

But why spread out such nauseating viands for dessert? Because the ethics of society are money mad. Because there is no success except economic success. Because the basis of society today is the dollar, and for the dollar we sell our goods, and our gods.

Some say that the commission business in medicine has come to stay; that the real estate man gives commissions; the banker gives commissions; the lawyer gives commissions, and why shouldn't the doctor get commissions. The same wiseacres say that quackery has come to stay, and so it has. Quackery is the mushroom that grows from the decaying roots of the great oak of honorable medicine. They spring up here and

there in a night and reach maturity and decay before the noon of the first day. And so it is with the medical tradesman who would exploit his patients and degrade his profession. They will soon be on to him. It will be only a day before sharp old deacon Jones will discover that of the thousand dollars he paid for the gastroenterostomy on his poor dying wife, seven hundred and fifty dollars went into the local bank and eventually paid for a piece of his neighbor's farm to add to the medical tradesman's ranch.

When he hears that his cousin's wife's sister is about to be taken for a somewhat similar purpose to St. Caroline's hospital, he will hitch up and drive over and put his cousin's wife's sister's husband next. Nothing is so disastrous to the legitimate occupation, effort, attitude and position of the doctor; nothing is so fascinating to the on-looking community, to the envious contemporary, to the admiring relatives, as the economically and rapidly successful results of the irresponsible fee-splitter. But rest assured, my friends and colleagues, these methods cannot stand the light of day. Society has not forgotten the ancient ethics and ideals of our profession so far as to allow the friendly, confidential and trusted family doctor to drop into the philosophy and conduct of the huckster, who cries his pitiable wares in the professional market place. Rest assured these things will come to the light of day, and the exploited and deluded people will turn from the cheap, business-like, medical tradesmen as they have turned before from many a fascinating quackery or a medical delusion, and when they turn it will be with nemesis-like justice that they turn to rend them.

CARDIAC AND RENAL ASPECTS OF PNEUMONIA.*

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to depend the welfare of the pneumonia invalid. A very large proportion of the danger with which this most acute and virulent of the infections is fraught lies in the mechanical burden which the heart must carry, and the chemical residuum from which the kidneys must rid the system. In other acute infectious toxemias, the role of the kidneys as emunctories may be said to overshadow in importance the part played by the heart in combating the disease and carrying the patient through to convalescence. In pneumonia, on the contrary, owing to special conditions, we find circulatory considerations taking precedence of all others in determining the outcome. "Patients who die of pneumonia are killed by cardiac insufficiency," says von Jürgensen, and the truth of this statement is attested by the fact that nearly every system of treatment now employed has substantially the one aim, of maintaining the efficiency of the heart, which, through a brief but stormy period of infection, is taxed to the utmost of its functional capacity.

This being the case, it becomes of the utmost importance to study the circulatory aspects of this disease. At the outset we must be careful to draw a distinct line between symptomatic involvement of the heart and pathologic changes of its tissues occurring as complications. This latter series—endocarditis, pericarditis, etc.—will receive consideration later in the present symposium in the essay on Complications of Pneumonia. Contrary to the usual rule, we find in pneumonia that symptomatic involvement of the heart is of much greater practical importance than the occasional invasion of the cardiac tissues by the infective microorganism, and it is this element of cardiac overstrain to which I invite your attention.

Avoiding needless discursiveness, we may enumerate the salient and important features of acute pneumonia as follows:

1. Pulmonary consolidation with consequent interference with oxygenation and obstruction to the lesser or pulmonic circulation.
2. Pyrexia of a peculiarly fulminant and sustained character, resulting in great de-

Upon the heart and kidneys may be said
*Read at a meeting of the Chicago Medical Society,
Dec. 14 1904.

struction of tissue albumin (catabolism), loss of body weight, and physical prostration.

3. Toxemia. Improvement in technique has resulted in demonstrating the pneumococcus in the blood and tissues in so large a proportion of cases as to render it probable that a blood invasion exists in every instance, the lung changes being but one manifestation of a general pneumococcus infection. This pneumococcemia results in the formation and introduction into the nutritional fluids of the body of large quantities of toxin. • That the toxemia so induced is one of the most virulent may be inferred from the severity of the systematic reaction, and the high fatality of the disease. It is to the operation of one or more of the foregoing factors that the cardiac asthenia of pneumonia must be attributed.

Cardiac collapse rarely, if ever, occurs during the first, second or third days of primary acute pneumonia. Wunderlich has distinguished two forms of circulatory failure in pneumonia, i. e., collapse with a high temperature, and collapse of the crisis. In the first form the body temperature is high, although the face and hands may be cold: the pulse is small and rapid, and the skin dry. It may occur gradually, and last several hours, or may come on suddenly and pass off quickly, this being the less severe form. It is a grave development and occurs according to Aufrecht in about 0.5 per cent of cases. The second type of cardiac collapse occurs during the definite defervescence (crisis) in two ways, either at the onset of defervescence or more frequently after defervescence has begun. These forms are characterized by cold moist surface, normal or subnormal temperature, sunken face, and marked distress. In young asthenic subjects this collapse frequently passes off under stimulation; in alcoholic and senile cases it is often fatal. Another form of cardiac collapse is the heart failure that follows sudden exertion, such as the assumption of the upright position during convalescence.

Various explanations have been advanced to account for the cardiac collapse of pneumonia. Concordance of opinion cannot yet be said to exist regarding this point. As-

cording to von Jürgensen, in a part of the cases the high temperature which occurs from the start in connection with increased resistance in the circulation—at the periphery during the chill, in the lungs during the inflammatory engorgement—causes the weakness of the heart. In other cases of collapse occurring in connection with the crisis, pyrexial causes will not suffice for an explanation. These cases he explains by the hypothesis that the rapid lowering of the body temperature during critical defervescence suddenly withdraws an irritant to which the heart has become accustomed, and with which it cannot suddenly dispense, the result being lessened cardiac activity manifested as collapse. According to this authority, there is the apparent paradox of at one time an increase of, at another a decrease of, temperature producing analogous results. In contravention of the idea that temperature conditions are potent in the production of cardiac collapse may be advanced the clinical fact that the frequency of the phenomenon does not bear any direct relation to the height of the fever. Indeed, quite the opposite seems to be the case, it being a fact that sthenic patients who run a high temperature from the start are more apt to recover without circulatory disturbance than are those cases with less elevation of temperature, or with great irregularity of curve.

Since the concept of infective toxemia has become firmly established, it has supplanted all other ideas as an explanation of the cardiac asthenia of pneumonia. The uniformly injurious influence on the heart of the various acute infections forces the conclusion that this effect is produced by the action of bacterial toxins which reach the heart through the blood stream.

That some important factor in addition to the toxemia enters into the production of the circulatory anomalies of pneumonia seems certain. Were it otherwise, we would expect to have cardiac collapse with the same or greater frequency in other equally profound and more prolonged toxemias, such as typhoid, diphtheria, etc. The statement has received currency that the pneumococcus toxin exerts a direct paralyzing effect on the heart muscle. So far as I am aware, no proof

of this claim exists. Quite to the contrary, the interesting investigation of Pässler and Rolly (*Deutsche Archiv f. Klin. Med.*, Berlin, LXXVI, No. 6) seem to show that the pneumococcus toxin is not a direct heart poison, as is diphtheria toxin, and is incapable of inducing cardiac collapse without the cooperation of vaso-motor paresis. That the toxemia of the disease exerts a most deleterious effect on the myocardium by corrupting its nutritive pabulum cannot be gainsaid; still this is not the only, nor perhaps the most, important effect of the circulating toxins. For the other influences which undoubtedly contribute to the production of cardiac crisis in this disease, we must turn to the circulatory field, and here we find both in the systematic and pulmonary circuits conditions which try the dynamic power of the heart to the utmost.

Vigorous claims have been made that heart failure in acute infectious diseases is brought about by vaso-motor causes, and is not due to inherent cardiac weakness, as was supposed. These claims are founded on the researches of Reige 1, Rosenbach, Bouchard, Romberg, Fraenkel, Pässler and Rolly. It is doubtful however whether the events of an artificially induced pneumococcus septicemia should be taken as a fair duplicate of the clinical course of pneumonia. The most recent authoritative results along this line of research are those of Pässler and Rolly (already referred to). According to the conclusions of these authorities one of the earliest and most persistent symptoms common to all the acute infections is capillary paresis, produced by the action of infective toxins on the vaso-motor centers in the cord. This results in underfilling of the arteries and engorgement of the venous system. This is compensated for a time by extra work on the part of the heart, but the organ soon suffers through lack of its normal blood supply, coronary blood pressure being low. If it is possible to restore the blood supply to the heart approximately to normal, then it resumes its work and collapse is averted. Simple and logical as this explanation seems, it is not yet entirely susceptible of clinical proof. If vaso-motor paresis with hypotension is a common condition in pneu-

monia, the blood pressure charts of that disease should show it. Very discordant results have, however, resulted from blood pressure observations in pneumonia. The arterial pressure is found to be as variable as many of the other clinical manifestations. Up to the present, observations in this direction have not been numerous or painstaking enough to prove conclusive. Such as are at hand, however, fail to show the uniformly low blood pressure necessary to prove the vaso-motor contention of Pässler and Romberg and Rolly. The general direction of the pressure curve is downward as the disease progresses, but not to the same extent as is noted in typhoid fever and sepsis. In very unfavorable and fatal cases a rapid fall to 80 or 90 m.m. was noted. We cannot, however, regard pneumonia as being a hypotensive disease, as is typhoid fever, and while admitting that vaso-motor paresis may in certain hypertoxic cases play a leading role in inducing cardiac collapse, further proof is necessary before we can accept in full the vascular theory.

There still remains to consider the effect upon the heart of the mechanical obstruction in the pulmonary circulation. This has always been recognized as an important factor in bringing about heart failure in pneumonia. In a considerable proportion of cases as the lesions progress, especially if large areas are involved, there sooner or later arises what may become a very serious mechanical difficulty—the overfilling of the right heart and venous system. Weakened by the action of the circulating toxins, the heart is unable to respond to the extra demands made upon it, a paralyzing over-distention of the right heart resulting.

Heart failure in pneumonia is probably very seldom produced by any one single factor, but its causation is complex. The three principal causes are those which are here reviewed, i. e., the direct action of toxins on the heart, vaso-motor paresis, and over-distention of the right heart. In addition to these primary causes, there are numerous subsidiary ones, among which may be mentioned the high pyrexia and the chemical and physical changes in the blood, produced by the pneumotoxin. To these latter, acting in

conjunction with delayed circulation through the heart, may perhaps be attributed the formation of heart clot and thrombi, which underlie certain cases of sudden death in pneumonia.

The pulse in pneumonia may show wide variations. During the initial chill it is small and frequent, later becoming full and bounding—such a pulse as was formerly believed to demand blood-letting. As consolidation progresses and the action of the right heart becomes labored, the pulse is apt to be small and rapid. A pulse rate of over 120 in adults or over 140 in children is to be regarded as of grave significance, according to Quain. Greisinger gives a mortality of over one-third in patients who showed a pulse rate of over 120. The table given by Sears and Larrabee seems to illustrate the law that the mortality of pneumonia is in direct ratio to the frequency of the pulse. The line of average mortality seems to be drawn at a pulse rate of 130, below that the fatality is less than the average of 35.9, above it it is higher than the average. Opposed to any arbitrary interpretation of a high pulse rate, it may be emphasized that pulse frequency *per se* does not admit of any definite prognostic estimation. In the absence of delirium or coma, and if there is not too great an increase in respiratory rate, a frequent pulse is not necessarily an unfavorable sign. In the aged and feeble a weak frequent pulse is the rule. A steadily rising pulse rate after the fifth day indicates danger, since it points indisputably to cardiac inadequacy. It is especially ominous if associated with dirotism and lowered blood pressure. It is here that the sphygmomanometer may render us valuable assistance in prognosis and treatment. Irregularity of the pulse may also occur both in a heart, previously sound and especially when there has been a preexisting myocarditis. Should this occur at the height of the disease, the outlook is grave. More frequently it occurs after the crisis, and is of less note.

A sign of great importance is the pulse-respiration ratio. In croupous pneumonia there is always such a shifting that the respirations are relatively more frequent than the pulse. In severe cases they may even

become actually more frequent than the pulse. If there is a high degree of atheroma, this may be the case (von Jürgensen). A grave disturbance of the pulse-respiration ratio may be regarded as a sign of bad import.

The heart sounds are usually clear, and owing to increased tension in the pulmonary vessels the pulmonic second sound is sharply accentuated. A soft systolic murmur may be heard over the heart, as in weakness of the heart from other causes. Special or dangerous symptoms are not necessarily combined with it. With failure of the right heart there arise signs of dilatation of the right ventricle. This grave development is heralded by progressive diminution in intensity of the pulmonic second sound. The most valuable index of cardiac integrity and the one to be emphasized above all others is the pulmonic second sound. As a rule, cases which display a highpitched valvular second sound in the pulmonic area through to convalescence escape important cardiac disturbance. A progressive diminution in intensity of this sound is a sign of right heart failure, and should be a signal for the employment of supporting measures. The indications derived from careful repeated auscultation of this sound serve as a more reliable guide to cardiac therapy in pneumonia than the state of the radial pulse, which depends on the condition of the left ventricle and vaso-motor tone both of which are influenced in their character by the functional integrity of the right heart. Other signs of right heart failure are increasing dyspnoea, cyanosis, portal congestion with disturbances of digestion, extension of cardiac dullness to the right, tricuspid murmur, gallop rhythm and prune juice expectoration.

Turning now to the renal aspects of pneumonia, we find that comparatively little information is current regarding special lesions of the kidneys in this disease. Notwithstanding the fact that these organs serve as the channel of exit from the body of immense quantities of circulating toxins, the kidneys do not suffer in consequence to nearly the same extent as in some of the other acute infections, notably the streptococcus toxemias.

We may infer from this that the pneumococcus toxin does not exert a specially necrotic effect upon the renal gland structure, for acute infectious nephritis is not a frequent **complication** of pneumonia. Pneumonia complicating Bright's disease is familiar as one of the most frequent forms of secondary pneumonia, and it is unnecessary to state that under the irritation of the acute disease the Bright's disease becomes *pro tem* converted into an acute process. This is not a pneumonic nephritis, however. We are not warranted by clinical experience in ascribing to the pneumococcus any more important influence in the production of nephritis than is possessed by other infective organisms. In common with other acute infectious processes accompanied by high fever toxemia and grave disturbances of nutrition, pneumonia produces a severe degree of renal irritation, which may at any time pass the boundary line separating irritation and inflammation, and give rise to a typical acute glomerulonephritis. Such a process will possess no peculiar distinguishing features, and if the case does not end fatally the nephritis will subside without perpetuation as a chronic lesion. Anatomical changes of slight degree are present in the kidneys in most, if not all, cases of pneumonia, and are no more than result from severe irritation of these organs by other bacterial toxins. Fraenkel found cloudy swelling in every case of a series of 46 observed—the extent and degree varying in different cases, depending apparently upon the amount of lung involvement, and hence the amount of toxins generated. The histological changes are in mild degree those of a glomerulonephritis, i. e., congestion, swelling of the Malpighian tufts, granular degeneration of the epithelium of the convoluted tubes. The changes noted are undoubtedly produced by toxins during the process of elimination. Certain observers—Abramoff, Kleinmann—having isolated the pneumococcus from the urine in cases displaying albuminuria, erroneously ascribed the nephritis to the germ rather than to its toxin. Except in those rare cases in which the renal structure is the seat of a local pneumococcus infection, the urine does not contain the germ until the renal filter is render-

ed pervious by necrotic changes induced by severe toxic irritation.

Sears and Larrabee (Med. and Surg. reports of the Boston City Hospital, 12th Series, Dec. 1, 1901), in an elaborate analysis of 949 cases of pneumonia, found albumin in 624 out of 749 cases in which it was tested for. The death rate was found to run parallel with the amount of albumin in the urine. This association of high mortality with albuminuria may be ascribed to intensification of the toxemia, owing to renal inadequacy, produced by the epithelial changes in the kidneys, causing a heaping up of the toxins in the blood. We are warranted, therefore, in regarding the appearance and persistence of albumin in the urine as an ominous development in pneumonia. Should nephritis become established, uremia may be superadded to the infective toxemia already present.

The discovery of albumin, pus, blood and casts in the urine is in favor of mycotic endocarditis, or of a localization of the pneumococcus somewhere in the renal tissues, as occurred in a case recently under the observation of the writer.

Other urinary considerations in pneumonia are of less importance, and do not require discussion before this Society.

103 State Street.

THE ONSET IN PNEUMONIA-TYPICAL AND ATYPICAL.*

BY CHARLES SPENCER WILLIAMSON, B. S., M. D.
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The onset in the typical cases of pneumonia is so characteristic as to need no particular discussion. In few diseases are the symptoms so constant and so marked as in pneumonia. Yet in spite of this fact the atypical cases when they do occur may be so very atypical as to be entirely overlooked. In consequence many a pneumonia is found on the post mortem table where during life it was not even suspected, and this because

*Read at a meeting of the Chicago Medical Society, Dec. 14, 1904.

the onset had not pointed to the lungs in particular and the latter were in consequence not carefully examined. I shall sketch in a few words the typical onset; devoting more attention to the atypical cases.

Highly characteristic of a typical case is the suddenness of the onset. The chill is, as a rule, the first symptom noticed; it is usually violent, often prolonged and followed shortly by great increase in the frequency of respiration, usually above 30, dyspnoea, and then the sharp stitch pain in the side. The pulse respiration ratio is greatly disturbed, the respirations being increased out of all proportion to the pulse. In many cases the temperature has little effect upon the respiration. The headache, backache, slight bronchitis and general muscular pains which are so characteristic of many acute infections, are much less prominent symptoms in pneumonia, occurring perhaps one fourth of the cases. In rare instances a fairly copious haemoptysis may occur at the very beginning. For the first twelve to twenty-four hours there is usually little or no sputum. The sputum then takes on its characteristic thick, tenacious mucous character, adhering to the lips and to the vessel and with the well-known rusty color. When so typical a picture as this occurs, he must indeed, be a careless observer who would fail to examine the lungs at once, where the well-known physical signs make the diagnosis ordinarily a simple matter. Even where the pneumonia is central the symptoms are usually so typical as to admit of a probable diagnosis at once, and within forty-eight hours the physical signs of consolidation are usually obtainable.

ATYPICAL CASES.

Meningeal Onset. In a small number of cases the disease is ushered in with symptoms of meningitis, entirely apart from those cases where meningitis actually exists as a complication. This is an old and comparatively well-known fact, and pneumonia shares this peculiarity with a large number of other infections. Indeed here, as in typhoid, the resemblance to meningitis may for a short time be very striking, but the pulse respiration ratio followed soon by the evidences of

consolidation usually leave little room for doubt.

Abdominal Onset. On account of the grave consequences which might follow a mistaken diagnosis these cases deserve some attention. That pneumonia frequently begins with sharp abdominal pains as the most prominent symptom has long been known but little heeded. This fact was first impressed upon me about seven years ago when I saw one of the most distinguished abdominal surgeons in the country operate a woman for supposed salpingitis, the case dying within twelve hours and the autopsy revealing a double croupous pneumonia in full bloom. In this case the pain had been of an excruciating character. The onset was very sudden, with vomiting and tenderness in the right lower abdominal quadrant, where there was also some localized tenderness. This is a fair sample of this group of cases which is still much too seldom recognized. Attempts have been made, particularly by French and Italian authors, to classify the abdominal cases according to the localization of the pain and tenderness. They would especially separate the so-called appendicular form where the pain and tenderness are localized at McBurney's point for the first day or two. There is no doubt as to the striking way in which these cases may simulate appendicitis. Almost every feature may be present—lancinating pain in the right lower abdominal quadrant, tenderness localized at McBurney's point, vomiting, fever, leucocytosis, etc., may all be present. Indeed, apart from the physical examination of the chest, I know of no certain criteria by which the two may be differentiated. Mas-salongo (*Riforma Medica*, Dec. 11, 1901), calls particular attention to this in childhood and speaks of five cases operated on under the erroneous diagnosis of appendicitis. That these so-called appendicular cases are the most frequent form of pneumonia with abdominal onset can scarcely be gainsaid, yet for all that I think there is no justification for classifying them as a separate group of cases. The readiness to make the diagnosis of appendicitis in view of its great frequency,

without a careful physical examination of the chest is responsible for most of these errors. It is altogether probable that in most, if not all of these cases, a systematic examination of the chest would disclose the real lesion. The real lesson to be learned from this group of cases is that appendicitis should never be diagnosticated from an examination which limits itself to the abdomen only.

In other cases there may be intense pain, sometimes even of a colicky character, with tenderness just beneath the right costal arch. It is in this group that cholecystitis, biliary and even renal colic may be mimicked for the first twenty-four or thirty hours. That pneumonia is more common on the right side probably accounts for the fact that the abdominal pain is more common on the right side than on the left. It would be going too far I think, to attempt to separate a special appendicular group, a hepatic or renal group in accordance with the location of the pain. What is urgently demanded is not so much the hyper-refinement of classification, but that the physician, and still more the surgeon, should remember the possibility of pneumonia in every case of acute abdominal pain, and more especially take to heart the elder Flint's word of warning that no diagnosis should ever be made where both heart and lungs are not carefully investigated. The explanation of the occurrence of these reflected pains in the abdomen is comparatively simple and has been repeatedly pointed out. The innervation of the abdominal wall is from the six lower intercostal nerves and these in their passage downward give off filaments (Luschka, quoted by Quain) to the diaphragmatic pleura, possibly to a part of the parietal pleura as well. It is plain therefore, that irritation of these parts of the pleura might readily produce a pain which would be referred to the abdominal distribution of these same nerves, and thus mimic disease of the abdominal organs.

Onset in Childhood. Croupous pneumonia while less common in childhood than in adults, is according to all late observers, by no means so rare as is commonly supposed. As a rule the onset is quite typical, a con-

vulsion however, frequently taking the place of the chill. Gillet (*Gazette des Hôpitaux*) has very recently emphasized the frequent onset of pains in the appendix region in childhood.

Senile Pneumonia. Pneumonia in the aged, on the other hand, the so-called senile pneumonia, presents at times marked variations from the typical onset. Firstly the onset, or indeed the entire course may be completely latent, physical examination alone disclosing the pulmonary lesion. Aufrecht quotes Hourmann and Déchambre as saying, with characteristic French pithiness, "Old women do not even complain of being ill. No one in the ward notes the slightest change in their condition. They get up, make their beds, go around, eat as formerly, then they feel themselves somewhat weak, lie down on the bed and die." For the many cases of pneumonia seen in the asylums and institutions for old people this description is particularly apt. In some cases there is a chill, but the rise of temperature is very slight. A chill occurring in old people with no apparent cause should always be regarded as suspicious of pneumonia. In what are known as the terminal pneumonias, and by this I do not mean the so-called hypostatic pneumonias, but the genuine croupous pneumonia occurring as a terminal infection, the onset and indeed the entire course, is frequently latent. This is especially true when the pneumonia terminates some other acute infection where apparently the vitality is already too greatly impaired to respond to the new infection with such symptoms as chills, fever, etc. In alcoholics the same statements apply. While in many cases the onset is perfectly typical, in a very considerable proportion the onset is entirely latent, there being neither the initial chill nor expectoration and a comparatively slight dyspnoea. Anyone who has had the opportunity of seeing many cases of violent delirium tremens in hospital practice where the difficulties of physical examination are very great because of the frequent necessity of confining the patients, must have often noted in the cases

which come to autopsy, a frank pneumonia quite unsuspected during life.

Onset in Friedlander Pneumonia. As is well known a certain small proportion of cases of croupous pneumonia are due to the pneumo bacillus of Friedlander. The clinical symptoms do not ordinarily differ from those of cases caused by the pneumococcus. In one important point however these cases frequently differ from the ordinary form, namely in regard to the character of the sputum. As I do not remember to have ever seen attention called to this point I should like to call attention to it here. As already mentioned the sputum in the ordinary form is tinged with blood at the onset, taking on its characteristic rusty color shortly afterwards, and is very tenacious and viscid. In the Friedlander pneumonia the sputum takes on an entirely different character and from it alone a fair presumption of the form of pneumonia can often be made. It is intensely mucoid, ropy and stringy and when a mass of it is lifted up on a knife blade or similar instrument, it can be drawn out in long threads. This is not remarkable when we remember the peculiarities of the Friedlander organism in the culture media. At the risk of digressing for a moment from my topic, let me point out a fact comparatively little known or referred to, and that is that on the post mortem table it is frequently quite possible to pick out a case of Friedlander pneumonia with considerable certainty by observing the character of the cut surface. Instead of the comparatively dry surface ordinarily found during the second and third stages, the surface of section is bathed with the same ropy, tenacious, thick, rusty-looking mucus which has really something quite characteristic about it, and once having been seen is easily recognized.

Onset with General Pneumococcus Infection. Very much rarer than any of the above cases, but likewise very much more interesting are the cases where the onset is with a pneumococcus septicaemia. The researches of the last two or three years have shown how frequently pneumococci may be recovered from the blood after the primary

lesion in the lung has developed, but it is still not very generally known that there are cases of generalized pneumococcus infection where the lung lesions never develop or if they do, develop subsequent to the general infection of the blood. One such case which I have seen in consultation within the last month illustrates this point so excellently that I cannot refrain from quoting it. The patient, a strong, robust man always well, except for a chronic naso pharyngitis, was suddenly attacked with intense headache localized above the right ear, with however no chill and a rise of temperature to above 103 degrees. Within a few hours the right ear began to discharge a thin, watery, blood-stained, serum. At the same time a precisely similar fluid came from the nose. There was an old perforation of the right ear drum, and it was through this that the otitic discharge occurred. Physical examination was absolutely negative for several days, after which a basal pneumonia developed. During this time the temperature was continuously high. The secretion from the ear showed a nearly pure culture of pneumococci, and a blood culture (8 c.c. of blood) planted in flasks of bouillon gave a pure culture of pneumococci twenty-four hours before the physical signs of consolidation in the lungs were definitely present. The sequence of events in this case may, I think, be followed with considerable certainty. The seat of infection was in the nasal pharynx, possibly in the middle ear as well, and not improbably associated with the chronic naso pharyngitis. From one or both of these sources pneumococci were absorbed into the circulation, producing intense headache and high fever, but no chill. This is proven by the finding of pneumococci in the blood at this time, following which the physical signs of a basal pneumonia developed. We must therefore recognize cases of pneumonia in which the onset is with a pneumococcus septicaemia. It would lead us entirely too far to enter upon a discussion of the exceedingly important bearing which a case of this kind has upon the question of the avenue of infection in pneumonia. For this particular case I con-

sider the haematogenous origin of the lung lesion as definitely proven. Without wishing to generalize from a single case, however clear that case may be, it may be noted that this lends additional color to the opinion which is steadily gaining ground in the last few years that pneumonia is primarily a general infection, with local manifestations in the lungs. With the increasing frequency and improved technique of blood cultures, cases of this kind will probably be more frequently found.

THE PHYSICAL BASIS FOR DIAGNOSIS IN PNEUMONIA.*

BY ROBERT H. BABCOCK, M. D., CHICAGO.

The pulmonary findings on which the diagnosis of acute croupous pneumonia may be based are determined by the pathological condition within the lung, and as this latter varies so much in extent and in character during the different stages of the process, the physical signs display corresponding differences in definiteness and character. There are three propositions, therefore, which I regard as fundamental to a correct understanding of the data furnished by examination of the chest in this affection. 1. The exudate is not necessarily lobar in extent, but may be lobular or patchy, and hence the objection to the term lobar pneumonia. This is especially true of this disease in children and old or debilitated subjects. It is ignorance of this fact that is responsible for the failure on the part of some practitioners to always recognize the disease in the class of cases referred to.

(2) The inflammatory exudate does not always form rapidly and uniformly throughout the affected lobe, and hence three or four days may elapse before the exudate beginning deeply spreads to the surface, so as to become clearly recognizable at the bedside. This fact accounts, I think, for many a disastrous delay in diagnosis, and hence has an important bearing on treatment.

(3) There may sometimes be a striking contrast between the severity of constitutional symptoms and the results of physical examination of the lungs. For this reason a practitioner should make repeated examinations of the chest early in the course of the affection. Later on frequent and careful examinations are also necessary, because of the liability to extensions and the importance of their recognition. In fact, I believe the state of the lungs should be ascertained at each professional visit, since only by so doing can the physician have an accurate knowledge of what is going on.

From the standpoint of diagnosis by physical signs, therefore, I think cases of pneumonia may be divided into four classes. One, those in which the diagnosis may be made almost at a glance, or at all events from the history and symptoms without examination of the lungs, yet which when made discloses characteristic and positive findings (typical pneumonia.) Second, those in which the constitutional disturbance is grave but often misleading and yet physical signs may be distinct and typical (asthenic pneumonia.) Third, those in which with grave and highly suggestive constitutional symptoms there are yet no reliable physical signs to be discovered by the most painstaking examination of the chest (centric pneumonia.) Fourth, those in which both constitutional symptoms and objective physical findings are not typical (typical pneumonia.)

Having now stated these postulates, which should be kept in mind if one is to understand the variations and difficulties sometimes encountered in the diagnosis of this malady, I will proceed to a description of the physical signs as presented in an ordinary case of acute primary fibrinous pneumonia.

Only yesterday I was asked to see in consultation a man of sixty, who was suffering from cardiac insufficiency. He had been having a cough of chronic bronchitis and two weeks ago was edematous. Treatment had improved his condition, but for the last three days he had been slightly delirious. I found a heart lesion, to be sure, but the pulse was only 96, and signs of stasis were not present.

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The thing that struck me at once was the character of the respirations, which were shallow and 40 to the minute. Mouth temperature was normal, but in the rectum the thermometer registered 102° F. The lungs were then carefully examined, with the result that on the left posterior axillary line, not far from the scapula, was discovered a small patch of dullness with increased resistance, slightly exaggerated tactile fremitus, and bronchial breathing. On these findings a diagnosis of pneumonia was made. Without the loss of normal pulse respiration ratio, I should not have suspected acute pneumonia, but with this and the rectal temperature I was led to go over the lungs with more than ordinary care and with the result just stated.

State of Engorgement. In this stage it is often only possible to make an inferential diagnosis, and this must be based on the history and symptoms rather than physical findings. The breathing may be accelerated, and the expansion of the affected lung may be restricted. The loss of normal pulse respiration ratio so valuable for diagnostic purposes at a later stage is, however, not likely to be apparent. There may be slight deviation from normal findings, as stated later on, but on the whole examination may be said to afford rather negative information in this initial stage.

Stage of Hepatization. Inspection is now of value by noting the bright eye, flushed cheek, perspiring skin and hurried, labored breathing. This last should be especially noted, since in typical cases it is accelerated out of all proportion to the pulse. Indeed, this loss of normal pulse respiration ratio is of immense significance, and should be carefully sought for, especially in children, and in old or debilitated subjects, in whom lung findings are so often indefinite. Inspection of the thorax may be of material aid, particularly in the young, in whom, if a lower lobe is involved, there may be an apparent enlargement of the side. Writers in the early part of the last century differed much in their estimate of this sign. Thus Laennec, Andral and Woillez denied such increase, while Broussais and Wintrich maintained

that the affected half of the chest is enlarged from 0.5 to 2.5 cm. We know that the volume of the hepatized lobe is somewhat increased, as shown post-mortem by indentations in its surface corresponding to the ribs, but, as pointed out by Aufrecht, the lobe is only in the state of forced inspiration and not actually increased over its normal dimensions. This expansion, together with restriction of its expiratory movements, gives to the side the appearance of being enlarged over its fellow. This appearance is, however, not so pronounced as in pleurisy with effusion, and the apex beat of the heart is not usually displaced to any appreciable extent toward the opposite side, a valuable point in differential diagnosis.

The detection of herpes, is of a certain degree of diagnostic value, but its absence possesses no importance since, according to Juergensen, it is present in only from 13 per cent. to forty-three per cent. This eruption is generally seen about the lips, but may appear on other parts, and generally makes its appearance on or about the third day. Dilation of the pupil on the side corresponding to the pneumonia has been observed, but is by no means a constant nor in my experience frequent feature.

Mensuration is of so little value that any information it may furnish is more than offset by the difficulties attending its use. I know of no one who now employs it for diagnostic purposes.

Palpation may be very useful in some instances, but cannot be said to yield uniformly positive results. Theoretically, pectoral fremitus may be said to be diminished over the inflamed lobe in the stage of engorgement and increased in that of hepatization. As a matter of experience, however, palpation is of small aid in the beginning of the process, while during consolidation tactile fremitus may be decreased in consequence of blocking of the bronchioles, alveolar passages and infundibula by an abundant exudate (massive pneumonia), or on account of the interposition of pleuritic exudate between the lung and chest wall. For these very reasons,

however, palpation ought to be practiced, since it is likely to yield valuable information on other points than that of mere hepatization.

The detection of increased vocal fremitus over a circumscribed area is of great importance in cases of patchy pneumonia, and often helps materially in the differentiation of such a patch of dullness with indefinite auscultatory findings from one due to pleuritic exudate. In young children in whom percussion is often difficult and unsatisfactory, I have often derived most valuable information from palpation. The child's chest is an admirable conductor of vibration, and although a baby's lungs may transmit a ery or expiratory moan in all directions, still over a small patch of lobular consolidation the fremitus thus produced is usually perceived by the hand with greater distinctness than elsewhere. As pointed out by me in my discussion of Dr. Northrop's recent address in this hall, this means of investigation has more than once enabled me to locate a pneumonic patch of the exact location of which I was otherwise uncertain.

Percussion. By palpation also we are enabled to detect enlargement of the spleen, a feature common in pneumonia in children, and often present in adults. Next to auscultation this may be said to yield the most valuable results. It is based on the well known principle that in proportion to the displacement of residual air by the inflammatory exudate, the ordinary pulmonary resonance becomes replaced by dullness. In the same way in engorgement, when the alveolar lumen is encroached upon by the distended capillaries, the percussion note over this region is apt to be more or less impaired. At the same time it takes on a slightly tympanitic quality, which by most writers is attributable to lessened elasticity and tension on the part of the engorged parenchyma. By Gerhardt it is ascribed to admixture of air and moisture within the affected area, and hence is apt to be most marked as well as transient during the transitional period, when engorgement is passing into hepatization. In this stage of passing engorgement,

however, the portion of lung bordering the pneumonic zone lacks its normal tension, and may yield a note so full and tympanitic as to obscure the slight deadening of tone due to the engorgement, and hence the unwary physician may be led into error.

With the oncoming of hepatization, pulmonary resonance becomes correspondingly impaired, until at length with complete consolidation unmistakable dullness is produced. The degree of dullness depends upon the compactness and extent of the exudate. In classical cases one or more lobes are involved throughout, and dullness is pronounced, but in the patchy cases already referred to there may be but a small area of relative dullness which in the old with rigid chest walls may be readily overlooked. In all doubtful cases, therefore, careful comparison should be made with the opposite side and the degree of associated resistance should be carefully noted. Palpation of such a suspicious area should also be made, since any increase of fremitus, however, slight, may corroborate and clinch the conclusion drawn from percussion.

It should also be borne in mind that time is often required for the exudate to reach the periphery, and hence repeated daily percussion of such indefinite areas ought to be made. When unmistakable dullness is present, it is well to remember that it is rarely so intense or absolute as over a pleuritic effusion. Moreover, it does not spread from below upward and the upper line of dullness does not shift with change in the patient's condition, a valuable point in differential diagnosis.

As the stage of red passes into that of grey hepatization, there is a period of time when the previously dull note becomes again slightly tympanitic, due to the admixture of air with the liquifying exudate. As resolution progresses, pulmonary resonance reasserts itself, until in favorable cases it becomes fully restored. This may require only hours or days in some instances, but not infrequently relative dullness may persist for weeks or months, and then points to defective resolution or the presence of pleuritic exudate.

In the correct interpretation of such per-

sistent dullness palpation is of aid, and should be practiced.

Auscultation. The most characteristic phenomenon elicited by physical examination is perceived on auscultation, and is the crepitant rale, but as this is transient in duration other signs must often be relied on. In the stage of engorgement the breath sounds are enfeebled and indeterminate for the same reason that resonance is impaired. As this stage merges into hepatization, they assume a bronchial or semi-bronchial character, and the crepitant rale is heard.

By some Leming's view is held that this rale is a pleuritic exudation rale, while most others hold to its intra-alveolar origin, but whatever view be correct, this rale in its purity is so peculiar that when once heard it can never again be mistaken. At this time it is purely inspiratory, and so evanescent that it may be present for only a few hours, depending upon the rapidity and completeness with which the exudate forms.

During the height of the consolidation, bronchial breathing is audible, depending in intensity and purity upon the state of the bronchioles, the same as does pectoral fremitus. Such rales as may be heard at this time are either pleuritic, or the fine subcrepitant ones of associated edema and bronchitis, and hence are usually heard about rather than directly over the dull area. The voice at this stage is usually of a pectoriloquous quality. This state of things persists until resolution sets in, when again for a variable length of time crepitant rales are distinguished. This so-called rale-redox differs somewhat, however, from that heard earlier in the disease. The rales still possess the same peculiarly sharp or clicking character, but are generated with both acts of respiration, instead of being limited to the end of inspiration. According to Page, they are somewhat coarser, but in this regard I have never been able to detect any difference. I have often noted, however, that crepitant rales, when present at any stage, frequently have to be sought for with great care, and many times may only be detected after the patient has given a cough. Neither this

true crepitant rale, nor any other sign, is essential to the diagnosis of pneumonia. It is the combination of the two or more signs which is significant. Thus in a patchy pneumonia, with slight exaggeration of fremitus and relative dullness limited to a small area, the addition of bronchial breathing over this area and in particular of crepitant rales places the diagnosis beyond doubt.

With progressing resolution the breath sounds grow less and less bronchial, until normal vesicular respiration reappears. Râles, if present, gradually disappear and when resolution is complete the lobe furnishes normal physical findings. Such return may be rapid and complete, but it not infrequently happens that the signs of hepatization persist for many days or even weeks after temperature, respirations and pulse have become normal. This is particularly so in the cachectic and bespeaks imperfect or delayed resolution.

In classical cases of sthenic pneumonia the abrupt onset with rigor in about 54 per cent pain in the side, high fever, cough, rusty and tenacious sputum, flushed face, full bounding pulse, disproportionately hurried breathing, expiratory grunt, dullness, bronchial respiration and perhaps crepitant rale form a symptom complex which renders diagnosis easy and certain. Likewise in the asthenic type of the affection the association of profound prostration, fever, slight cough without expectoration it may be, loss of normal pulse respiration ratio, and often well-marked findings in the lungs places diagnosis beyond doubt.

In centric pneumonia, on the other hand, without definite pulmonary signs and in atypical cases in which constitutional symptoms may be misleading and the lungs display patchy dullness, with indefinite auscultatory findings, the diagnosis may be sometimes impossible without calling to our aid other means of investigation, as microscopic examination of the sputa, estimation of the chlorides, a leucocyte count, and even blood cultures.

Microscopic inspection of properly stained sputum will, when characteristic diplococci

are discovered, prove a valuable aid and may oftentimes substantiate a diagnosis which from examination of the patient alone is uncertain. But in these atypical cases in which the character of the sputa would be of assistance, expectoration may be and often is wanting. Then it is we must resort to still other means. If, on estimation of the chlorides in the urine, these are found decidedly diminished, this fact, taken in connection with even indefinite yet suspicious pulmonary findings, may enable one to arrive at a correct conclusion. On the other hand, the chlorides are not invariably reduced in pneumonia, and Dr. E. F. Wells declares they may even be increased. Moreover, diminution of the chlorides is not confined to this affection, but may be met with in chronic nephritis and some diseases manifesting high fever; so that this means of investigation may, like inspection of the sputum, fail us in the very cases in which we need its aid.

How is it now with the leucocyte count? As a rule, the white cells are increased, often enormously so, and when hyperleucocytosis is present, it furnishes strong corroborative evidence in doubtful cases. But as is well-known, unfortunately the white cells may not be increased or even may be actually diminished, and I have known this to be the case in atypical pneumonia, as witness an instance recently seen in Cook County Hospital; consequently, reliance cannot always be placed on this means of investigation.

This brings us, then, to what may be considered the last court of appeal, namely, blood cultures. The elaborate investigations of Rosenow have shown that if a sufficiently large quantity of blood be taken under proper precautions, at least ten c.c., about 95 per cent of all pneumonias will display pneumococci in the blood. When such is the case, then the diagnosis is definitely settled. But what with the remaining five per cent which fail to show the germ?

All that can be said is, diagnosis is either impossible or must be considered inferential. In such instances I can only recommend that repeated painstaking examinations of the

lungs be made at each visit in the hope of at least detecting some minute patch where resonance is impaired, and bronchial breath sounds are audible. At the same time, make a careful count of the pulse and respirations, since if there be even a slight loss of normal pulse respiration ratio, it will, in my opinion, suffice in connection with vague lung findings to establish the diagnosis. This loss of normal ratio may be so slight as 28 to 96, as in a recent instance. Yet since the relation should be 28 to 112, even so inconsiderable a perversion is often of immense significance. On the whole, I think it is not too much to say that if all these various means of physical exploration be made, the number of cases of pneumonia that escape recognition will sink to an insignificantly small number.

"Jove from his urns dispensing good and ill,
Gives ill unmixed to some, and good and ill
Mingled to many, good unmixed to none."

Homer.

THE DIAGNOSIS AND METHODS OF TREATMENT IN CHRONIC PROSTATITIS.*

BY F. A. LEUSMAN, M. D., CHICAGO.

The prostate consists of from thirty to fifty branched tubular glands, converging toward the base of the colliculus seminalis. Many ducts join with one another and open into the urethra in the region of the caput by from fifteen to thirty orifices. The epithelium lining the tubules is cubical. The prostatic urethra is made up like all parts which conduct urine of the following layers: (1) Mucosa; (2) submucosa; (3) muscularis; (4) fibrosa. The mucosa consists of an epithelium and a tunica propria. The former is the so-called transitional epithelium composed of three or more layers. While these cells differ in the various layers, they are quite similar in all parts of the canal, so that in pathological conditions of the tract, where the cells appear in the urine, it is difficult to say from what part these cells are derived. The muscularis in the prosta-

*Read at the Dec. meeting of Chicago Medical Society.

tie and membranous urethra shows two layers of smooth muscle fibres, an inner longitudinal and an outer circular coat. The circular coat is wanting in the pars cavernosa, and the longitudinal layer becomes very thin. In old individuals the gland tubules form so-called prostatic stones, about one millimeter in diameter, very hard and often calcified. A considerable part of the prostate is formed by the interstitial tissue between the glands. This is made up of a firm connective tissue containing many bundles of smooth muscle cells. It forms at the outer surface of the organ a well developed capsule, and on the inner surface next the urethra it is collected into a thick layer, from which there proceed in the region of the veru montanum strands of connective tissue running radially towards the capsule. At about the middle of the prostatic urethra, on its floor, is the colliculus seminalis (caput gallinaginis, veru montanum), an eminence at its highest point of about 3 m.m.; in its descent as mucous folds gradually it loses itself towards the trigonum and membranous urethra. On the anterior decline of this hill between the mouths of the two ejaculatory ducts is the opening of the sinus poeularis, or so-called utriculus prostaticus, about 10 m.m. in depth; it represents the remains of the caudal end of the fused ducts of Mueller, and is lined with a double row of ciliated epithelium containing small tubular glands. The ducts of exit, about 1 c.m. in length, have been called parietal glands in contradistinction to their ramifications, the terminal glands; both sets freely anastomose. Eberth distinguishes: (1) The parenchyma; (2) the framework of scaffolding; (3) the muscles. The glands are the parenchyma, opening at the caput, and make up in the adult about $\frac{3}{4}$, $\frac{1}{2}$ to $\frac{5}{6}$ of the organ. The glandular development, however, is subject to many variations, so that we encounter soft prostates, rich in glands, and hard prostates, poor in glands, and rich in muscles.

The first anlage of the prostatic ducts appears during the third fetal month, in the form of solid epithelial buds of the urethral epithelium, that grow from the prostatic

floor, throwing out branches laterally. By progressive longitudinal growth they perforate the mucosa and also the next layer, composed of nonstriated urethral muscles. Eberth refers to rare cases where the glandular masses have all been placed anterior to the urethra.

The scaffold contains, besides blood vessels and nerves, elastic and numerous nonstriated muscular fibers. On the surface this framework becomes condensed into a layer about 1 m.m. in thickness, rich in nonstriated muscles, and fibrous connective tissue, the capsule of the prostate. The nonstriated muscles are a continuation of the musculature of the ureter and the trigonum vesicae, the striated part of the perineal muscles.

An additional close relationship between prostate, bladder and rectum is maintained through the arterial supply derived from branches of the inferior vesical and the middle hemorrhoidal arteries. They enter the gland conjointly with the ejaculatory ducts, to form capillary plexuses around the walls of the ducts. The veins empty into the vesico-prostatic plexus, an aggregation of veins that fills out the bilateral sinus between bladder and prostate. The plexus vesico-prostaticus receives the veins derived from the bladder, prostate, seminal vesicles and vas deferens. *It is connected by large branches perforating the prostate with the submucous venous system of the urethra and the bladder.* The lymphatics, with which the prostate is richly supplied, take origin around the glandular walls, ramify with the venous plexus, and finally end in the internal iliac nodes. The prostate has a rich nerve supply derived from the hypogastric plexus. It contains end bulbs. A ganglion containing twenty cells has been described by Reichert.

The prostate, situated close behind the symphysis pubis and resting on the deep perineal fascia, enjoys a limited range of movability in the normal state. It is from apex to base $1\frac{1}{4}$ inches long, $1\frac{1}{2}$ inches wide at the base, and less than one inch in thickness.

The prostate gland is a sexual organ and only accidentally a urinary one, whose func-

tion is to provide an abundant secretion in which the spermatozoa can live. Comparative anatomy shows that testes exist in all animals; the seminal vesicles, however, the prostate and Cowper's glands are not always present in the lower animals, sometimes one and sometimes another being absent, diminutive, or perhaps greatly enlarged. The testes are the essential male organs of generation. The accessory sexual glands furnish a medium for the spermatozoa to live in. If any of them are absent, the balance grows larger and perform their function. The complete separation of the seminal vesicles from the vasa deferentia and the consequent absence of any direct communication between the two, as seen in the elephant, swine, anteater, beaver and others, seems to controvert the belief that the office of the vesicles is that of a storehouse for the spermatozoa.

Perineal prostatectomy with total removal of the floor of the prostatic urethra, also external stricture operations; Zeissl with his demonstrations that the vesical internal sphincter relaxes through the action of the nervi erigentes; Rehfish with his stiff catheter experiment introduced close up to but not beyond the internal vesical sphincter, have all shown that we exercise voluntary control over the internal vesical sphincter, even if that muscle is not straited.

Experimental surgery on the human and other closely related mammalia has shown that castration in a less degree, vasectomy, diminish the size of the prostate at the expense of its glandular part. Castration causes a lessening of prostatic volume by abolishing its function. Castration or vasectomy can only then be followed by a reduction in the prostatic volume, if the overgrowth is of a glandular character. Hence we observe a small prostate always in the eunuchs, individuals who have been deprived of their testicles before they had been given time to develop their prostate glands. Prostatectomy immediately or soon after produces impotence. The normal prostatic secretion is a limpid, milky fluid of alkaline reaction, and free from mucus and rich in albumin, of characteristic odor. The micro-

scope shows it to consist mainly of lecithin, strongly refracting granules (the cause of the milky appearance), a few amyloid bodies, isolated epithelial cells, and perhaps a few leucocytes. These lecithin granules in all probability are the remains of degenerated prostatic glandular epithelium; this degenerated epithelium also forms the basis of the amyloid or straited prostatic concretions.

The addition of a one per cent ammonium phosphate solution demonstrates after one to two hours' time the spermin crystals in the absence of urine. The prostate has nothing to do with voluntary or involuntary control of micturition.

Pathological changes of the prostatic secretion appear to result in impotentia generandi. The secretion is now a thick, yellowish or reddish fluid, containing principally pus cells, and a less number of cubical, epithelial and red blood cells, and possibly bacteria. The prostatic secretion is subject to many changes. Congenital smallness of the prostate is not rare. Acquired atrophy may be senile, cachectic, functional, inflammatory and traumatic. The hypertrophy is glandular, myomatous or mixed.

Ciechanowsky teaches that the enlargement of glandular hypertrophy is not so much a real increase in glandular structure as a passive dilatation of the acini from an accumulation of physiological or pathological products; hence it is a pseudo-hypertrophy or pseudo-adenoma. Connective tissue proliferation (cicatrices) in the vicinity of the exit ducts appears to be the leading cause. The myomatous hypertrophy might be looked upon as a compensatory process. If the cicatrix formation begins mainly in and near the terminal glands, the same process will lead to atrophy. Needless to say, both processes involve different parts of the gland in a different degree.

Clinical observation leads to the conclusion that gonorrheal and other (metastatic) infections, as during the acute fevers, also accidental instrumental infection, furnish almost always the exciting causes, while masturbation, ungratified sexual desires, sexual

excess, coitus reservatus, alcohol, over-eating, lack of exercise, constipation, severe chilling, act as the predisposing moments. Severer forms of prostatitis are frequently accompanied or followed by cystitis, cystopyelitis and ascending nephritis. The patient refers his complaints to the urinary or sexual function as impotence, or suffers with pains, exhaustion and disabilities generally. Prostatorrhœa, constant or more often occurring as micturition and defection prostatorrhœa, exercises his mind greatly, since he mistakes the escaping substance for seminal fluid, pollakiuria and terminal painful emptying of the bladder; nocturnal micturition; severe and lasting headaches; dyspeptic pains; sensations of oppression, heat and cold, further add to his discomforts and overtax his forces. He is often seen shaking his penis vigorously and stroking his urethra from the perineum downward, while engaged in the effort to empty his bladder, and bring the dribbling of his urine after micturition to a standstill. This phenomenon is assumed to be due to either a paresis of intermittent spasm of the compressor urethra muscle. This same dribbling occurs in urethral stricture and prostatic hypertrophy, and tuberculous infiltration of the internal vesical sphincter. The bulbous sound and the catheter after voluntary urination serve for differentiation of the former two.

Perhaps not less annoying are disturbances of the sexual function, as absent, evanescent, or persistent erections, ejaculatio præcox, or painful emissions, so that the patient speculates whether the act is more conducive to pain than to pleasure. Finger attributes this pain at the moment of ejaculation to a compression of the opening of the ejaculatory duct or ducts, the result of inflammatory changes. Sexual desire itself in aggravated cases is nearly lost. The possibility of a total loss of sexual desire is more than doubtful. When sclerotic changes affect larger sections selves. There may be in addition nocturnal of the ejaculatory ducts, to a degree sufficient to cause them to lose their contractile powers, their lumen will remain patent, occasioning a spermatorrhœa of truly prostatic origin.

with no disease of the seminal vesicles themselves. There may be in addition nocturnal pollutions in excess, local and general neurones. The urine is clear or cloudy, but usually we can observe some of those comma-shaped short filaments issuing from the prostatic ducts. The second morning urine will almost always show them. The cloudiness is due to mucus, pus, bacteria, phosphates or urates. The eye distinguishes mucus and pus in excess, or we use Dhome's test by adding a saturated solution of caustic potash and then twirling the tube, when a ropy separation of pus will soon be provoked; in bacteriuria caustic potash will not separate the clear urine.

The centrifuge obtains a microbic sediment after there has been previously added an equal volume of absolute alcohol to the sample. In many, not by any means all, cases, a condition of neurasthenia, melancholia and hypochondriasis is observed, differing in no way from neurasthenia seen in cases without prostatic disease.

The diagnosis comprises a thorough general physical and psychical examination, reviewing all the organs seriatim and inquiring into the antecedents and especially the habits of the patient. Constitutional diseases, like syphilis, diatheses, like gout, tuberculosis, or nervous system disease are searched for. Previous forms of treatment and results are noted. We investigate possible sources of ascending or metastatic infection by looking for evidences of gonorrhœa, typhoid, scarlet and other fevers, or the history of the use of surgical instruments, like catheter, sounds, instillators, electrodes, in the hands of an attendant or those of the patient himself. Surgical instruments not free from sepsis or trauma have in the past been favorite methods of conveying infection to the prostate. The diagnosis further concerns itself with other predisposing, coexisting or contributing factors, as phimosis, anterior urethritis, urethral stricture, epididymitis, varicocele, prostatic hypertrophy, contracture of the vesical neck, cystitis, vesical tumor, calculus and ulcer, ureteritis, ureteral stone, pyelonephritis, nephritis, renal tuberculosis.

calculus and tumor, hemorrhoids, rectal stricture or neoplasm, appendicitis and cholecystitis.

The various micturition and wash tests are of much practical clinical value, even though in many cases they only show that there is present somewhere a catarrhal condition of the urinary tract; properly conducted, they may even localize the source of the catarrh, but they must frequently fail in the nature of things when it comes to making a specific diagnosis. The three glass test is applied as follows: The patient urinates successively into two glasses. The first glass represents the urine plus contents of urethra; the second glass the urine as found in the bladder. The prostate is now expressed and the patient passes the remaining urine. The third glass shows the urine plus the prostatic secretion. In chronic prostatitis, as a rule, the first glass looks clear, containing filaments. The second glass is perfectly clear. The third glass cloudy. To obviate errors arising from contaminations of the anterior urethra, the patient is instructed to retain his water for several hours previous to the next visit. The anterior urethra is now irrigated by means of the hand syringe or the elastic catheter, with a boracic acid solution. If the urine passed after the washing is clear, anterior urethritis alone is present. If, however, it is clear with filaments or cloudy, posterior urethritis also is present. To exclude cystitis a narrow elastic catheter is introduced into the bladder, the organ washed out with warm boric acid solution. The catheter is closed and allowed to remain. At the end of an hour the urine accumulated in the bladder is discharged through the catheter. If the urine is clear, the implication of the bladder in the inflammatory process is excluded. In cystitis both glasses are cloudy; ammoniacal urine always means cystitis. In the case of an acid purulent urine, we consider pyelitis; if we can exclude tuberculosis, hypertrophy, stricture, calculus or neoplasm. Pus in the urine points to prostatitis or pyelitis; not to cystitis. On standing, pus coming from the kidney will form a fairly compact layer at the bottom, while the muco-pus

from the bladder forms a more flocculent and larger layer overlying the renal pus.

When pyelonephritis is suspected, the following test is recommended: The three glass test is taken and the samples preserved. Urethra and bladder are now irrigated with warm boracic acid solution till the return flow is clear. An hour later the catheter empties the bladder. If now the urine is as cloudy as the second glass before washing, the diagnosis of pyelonephritis may be made, and must be confirmed by finding albumin and casts, deficient urea and solids, and micro-organisms.

Micturition and wash tests cannot distinguish between unilateral or bilateral disease. Residual urine without hypertrophy in the wake of gonorrhea is depended on for diagnosing contracture of the neck of the bladder. The micturition tests, the endoscope and bulbous bougie, are relied on for recognizing a urethritis, stricture, urethral papilloma, and granulations. The proctoscope and finger will show hemorrhoids, rectal stricture, or neoplasm. The epididymis is palpated, its contour and size noted. It is said in early syphilis nodules are felt in the globus major, while in tuberculosis the globus minor becomes nodular. A careful examination will not forget to look for the typical signs of hernia and varicocele, with the patient in the standing position. The possibility of systemic cord diseases is remembered, and the Argyll-Robertson pupil, Romberg's symptom, and patellar reflex inquired into as a matter of routine.

In regard to prostatic carcinoma (that forming, according to Belfield, $\frac{7}{8}$ of its tumors), Hawley says upon the data at present obtaining, early recognition is dependent upon three not wholly satisfactory phenomena, and these three alone, to-wit: Pain in or about the prostate, *areas of hardness* (stony hardness), and nodosity palpable from the rectum, and tenderness. In chronic seminal vesiculitis the vesicles may and may not be enlarged. The palpating finger gives thus not always positive information.

F. Schlagintweit has observed that the drops of secretion after prostatic massage, if

allowed to fall in a vessel filled with water, float on the surface, or hang suspended like long bags from the portion floating on the surface. Seminal secretion becomes opaque as soon as it touches the water. Pus sinks in yellowish flakes to the bottom.

We rely as a test on what follows: The patient's prostate is expressed; after he empties his bladder we irrigate the viscus and the urethra with a warm 1/10 per cent. solution of methylene blue by means of a catheter. The blue solution is allowed to escape, and the organ is now thoroughly washed with a warm boracic acid solution, four ounces of which, when done, are allowed to remain. We now express the seminal vesicles. The vesical contents are micturated or drawn with a catheter and submitted to the action of the centrifuge and microscope. If, besides the spermatozoa, pus cells and possibly bacteria are present, the diagnosis of spermatoecystitis is established. We suspect the case in hand to be a tubercular vesiculitis, when there presents itself to the finger a more or less diffuse growth with irregular and not sensitive nodules, occupying the location of the vesicles, associated with other signs of tuberculosis, as nodulation of the globus minor and recurrent epididymitis, and tuberculosis elsewhere. As usual, the crucial test is the finding of the tubercle bacilli. While, as a rule, the stone searcher and the cystoscope are amply sufficient to determine the presence of a vesical calculus, we must rely on radiographs made by the expert for the finding of ureteral and renal calculus. A negative radiograph does not exclude calculus, as surgery has proven. Stones of a size smaller than orange seed are never shown by a radiograph.

Robinson reports an interesting case where a radiograph had shown what appeared to be ureteral stones. On operation it was discovered that the supposed ureteral stones were phleboliths occupying the exact location and course of the ureter. He claims that a phlebolith casts a shadow of more definite contour and location than the ureteral calculus; besides, the phlebolith's shadows are

liable to be bilateral, though in unequal numbers on each side.

Kelly's wax-tipped catheter has also frequently localized urethral stone in the female, besides determining the patency of the tube.

The cystoscope, correlated with lumbo-abdominal local symptoms and general conditions, will help us to form more or less accurate ideas as to the presence or absence of cystitis and vesical ulcer.

Tillman holds primary, even secondary, tuberculosis of the prostate to be very rare. The disease generally attacks young individuals. Its symptoms are those of chronic prostatitis. We look for evening temperature and loss of weight. Tubercular cystitis and prostatitis, as a rule, display a marked antipathy to silver nitrate solutions, and are correspondingly made more comfortable by bichloride solution, as instillations in the strength of from 1/20,000 to 1/10,000.

Caspar points out that, as a rule, other micro-organisms are absent in the presence of tubercle bacilli; hence a prostatitis or prostatico-cystitis without the presence of any micro-organisms must be suspected to be tubercular in character. Smegma bacilli are without exception associated with various other forms of bacteria. A tubercular cystitis is excessively tender to the touch, intolerant of distention of the vesical walls and instrumentation. This loss of capacity may be due to cicatricial tissue contraction or cystospasm.

Fenwick says a large percentage of renal disease originates in the prostate and induces such agonizing prostate and bladder symptoms as to have deceived the most expert diagnostician and surgeon. Unilateral renal tuberculosis descending the ureter, chronic renal abscess or descending pyelitis of calculous origin, or stone fixed in the lower orifice of the ureter; all these induce difficulty of urination, great irritability of the bladder, and penile pain.

It has occurred not rarely that cases of prostatitis have been treated for cystitis or pyelonephritis. Unnecessary suprapubic

cystotomies and nephrotomies were the result. Even operators with exceptional opportunities for skilling themselves record cases of false diagnoses, leading the patient to the ordeal of undergoing unnecessary operations. So Morris nephrotomized under the diagnosis of renal calculus a number of cases that proved to be, one a prostatic abscess, another a prostatic calculus, another an encysted stone of the lower end of the ureter, pyelonephritis, disease of the caecum (appendix?), and stomach, and spinal disease. Morris, out of 26 instances, cut down on the kidney five times where manifest disease was located in other parts, and four times where apparently no discoverable cause existed in the kidney or elsewhere to account for subjective symptoms.

It is one of the very common occurrences to meet patients whose hemorrhoids have been surgically treated with the promise of curing that pain in the rectum. In cases of prostatitis the rectal pain remains, even though the rectum itself is in better shape, after a hemorrhoid operation. Ureteritis and ureteral stone are, as a rule, secondary to trouble below or above, or from adjoining organs, by pressure, continuity or contiguity. The cystoscope has to be called on again for the purpose of making a specific diagnosis between ureteritis and pyelonephritis, on the one hand, or disease confined to the bladder. Much direct information and inferences will be gained by the intrinsic study of the ureteral orifices. In a state of healthy they may be indistinguishable, save for their efflux, or they appear as delicate, flesh-colored lines at the extremity of the interureteral structure and almost above it. Their color and potency vary with the distention of the bladder. Especially in prostatic inflammation, they not so very rarely become buried behind the basal swelling. Fenwick observes if a kidney and ureter affected by chronic tuberculosis become inflamed, the kidney would retract underneath the ribs, and the ureter shorten; in consequence of this the ureteral orifice gets pulled out of its place.

In brief, the appearance of the ureteral

orifices, their presence or absence in the cystoscopic view, the ureteral efflux, its force, frequency, rhythm, quantity, its freedom from blood, pus or chyle, unilateral or bilateral, will give us valuable evidences and inferences to form as to ureteritis, pyelonephritis, renal tuberculosis and calculus.

Hutchinson excised a normal vermiform appendix in a young man for attacks of what he and two physicians mistook for appendicitis. Ten days after the operation the patient passed a small renal calculus.

When experiencing difficulty of localizing the ureteral openings or observing their action, the writer has derived very much satisfaction by adopting a method described by Voelker and Joseph. The demonstration is indeed one of surprising beauty in its results.

Four c.c. of a sterile 4 % normal saline solution of indigo carmine, freshly prepared, are injected into the gluteal muscles. Within about twenty minutes the cystoscopic window will discover the intermittent jets of the now darkly colored urine, allowing fairly definite inferences as to the functioning power of each kidney. This test enables us to watch the ureteral efflux even when, as in prostatitis, hypertrophy or displaced pelvic organs, the ureteral openings cannot be brought within the visual cone. It is a simple and valuable test, and by empowering the observer to see has saved the patient from useless operations of an exploratory nature.

Echinococcus cysts must be mentioned as having occurred within or near the prostate. It appears to be a rarity of the first order.

In the foregoing the writer has endeavored to accentuate the importance of localization, as well as the necessity of recognizing associated pathology.

Intravesical segregators, like Luy's and Cathelin's, are occasionally employed for the purpose of receiving the urine separately from each kidney. They are somewhat uncertain in their results, for we cannot know with any degree of assurance whether they separate the urines or not. The injection of methylene blue will help to make these tests more reliable. The segregators are often em-

ployed with less pain than the ureteral catheters. The Harris instrument, equally unreliable, has the additional disadvantage of boring its prongs into the vesical mucosa, thus being liable to cause ecchymoses and ulcers. The cystoscope, as an easy, applicable, painless, harmless and direct-view-giving method, has distanced both the ureteral catheter and segregator. As Voelcker says: No method is infallible, because no man that operates the method is infallible. Despite the well-grounded criticisms of Israel as to the newer methods of testing renal sufficiency, Kümmel's record of only 4% mortality in 62 nephrectomies proves practically and conclusively the added value of the phloridzin test and cryosecopy of the urine and blood. But time for separate ureteral catheteral withdrawal of urine (with the catheters *in situ* for three or more hours), and the attendance of a skilled physiological chemist (absolutely necessary to make the latter tests valuable), are not always at our command, nor even desirable in operations not nephrectomies; provided we observe carefully the general clinical behavior and apply the ordinary urine tests and cystoscopy with indigo carmine injection.

Kapsammer has observed that even under normal conditions the kidneys do not secrete equal amounts of urine; the use of the ureteral catheter in itself exercises an influence on the secretion of the kidneys in causing a reflex oliguria or polyuria. He explains that the freezing point gives us a basis (uncertain) for the molecular concentration of all the organic and inorganic matter contained; the measurement of the electrical conduction gives us a criterion for the concentration of the inorganic constituents alone; he has not made any experiments with electrical conduction, because they probably would not furnish any more reliable results than cryosecopy. He instances among a number of cases one of bilateral pyelitis with very little renal parenchyma on one side, and greatly damaged on the other, and yet the freezing point showed normal. Another possible source of error is the escape of urine along the side of the catheter. The

indigo carmine test is superior to methylene blue, because it is secreted non-changed, both indigo carmine and methylene blue tests are superior to cryosecopy. He proposes the subcutaneous injection of 0.01 phloridzin in a hot, boiled, watery solution (cold water precipitates phloridzin). Normally, sugar appears twelve to fifteen minutes after injection. If the sugar reaction shows twenty to thirty minutes *post injectionem*, renal function is disturbed. If the reaction is later than thirty minutes, nephrectomy is contraindicated. He tried without failure this process in seventy cases with thirty operations. It proved more reliable than the other methods. He sums up as the best methods:

1. Bilateral simultaneous ureteral catheterization.
2. Phloridzin method.
3. Indigo carmine method.

There is but a limited sphere for the use of cryosecopy of urine and blood. He asks: What are the advantages of the new methods? And answers: In place of speculation, we have clear knowledge of facts; in place of hesitating, uncertain surgical intervention, we have a definitely planned operation method, according to indications, and last, but not least, we are enabled to make an early diagnosis, leading thus to early and successful operation. The new methods will enlarge the domain of nephrectomies at the expense of nephromies. A nephrectomy is better even in tubercular pyonephrosis of severe degree, as experience teaches that a nephrotomy does not cure obstruction, hence fistula and invalidism and early death follow. There is no reflex surgical anuria in nephrectomy, but insufficiency of the remaining kidney.

The positive diagnosis of prostatitis rests on the palpating finger, noting changes from the normal in the form, size, consistency, movability, sensibility, and also the prostatic secretion.

The prostatescope shows increased tenderness, tendency to hemorrhage, general congestion, swelling of the caput.

A spontaneous tendency to hemorrhage and non-tolerance of silver instillations,

instrumental manipulations, arouse suspicions of tuberculosis. The prostatic secretion carefully collected is then submitted to microscopy, culture, and guinea pig experimentation, after the procedure of Belgard, as quoted by Caspar. "The guinea pigs got at first 0.5 of the Koch's tuberculin T.R. This is to prove that they were not tuberculous prior to the inoculation. If they are tuberculous, then this dose is deadly to them. If they are still alive several days after this injection, then we may assume, with a fair degree of certainty, that they are not tuberculous. In this case the one received an injection into the peritoneal cavity of the washed urinary sediment mixed in about 0.2 of sterile water. The other received the same quantity subcutaneously. If the urine contains tubercle bacilli, then we will find with absolute certainty in the latter, in from three to four weeks, large, even externally palpable, glands in the region of the fore and hind feet, according to the point at which one inoculated. The glands are already partly in a stage of cheesy degeneration, and contain tubercle bacilli.

The intraperitoneally inoculated guinea pigs develop a general miliary tuberculosis. They are killed after six weeks, and we find the characteristic nodules on the peritoneum, omentum, spleen, lungs, kidneys, or in single ones of these organs.

If we find neither glands in those were subcutaneously inoculated, nor nodules in those peritoneally inoculated then we may be certain there were no tubercle bacilli present in the urine, and may say the purulent process in question is not tuberculous.

The tuberculin reaction cannot take the place of inoculation. It has been proven, by the recent investigation of Naegeli and others, that the large majority of all persons have tuberculous foci somewhere in the body without being tuberculous; consequently we have to differentiate between a real tuberculous disease and latent tuberculous foci which do not become noticeable.

The writer considers prostatitis and hypertrophy of the prostate as due to the same causes, and having the same pathology.

But there is a clinical difference, and that is, whether the disease in the gland causes retention or not. If the catheter, after voluntary micturition, drains no urine, the case is looked upon as one of prostatitis; if residual urine exceeding four drams is present, the case is diagnosed as one of hypertrophy. If but a small amount of residual urine, from a few drops to say four drams, the residue may be due to a temporary cysto-spasm of the internal vesical sphincter, or contracture of the vesical neck. The age of the patient is also taken into consideration.

If the means alluded to allow us to make a diagnosis of prostatitis and its complications, the prospect of a cure in a clinical sense is not so very bad; even in severe cases amelioration at least may be promised. It will be important to remember that it will take time and patience. Constant relapses, an undesirable but natural and regular occurrence, will test the sufferer's endurance; their frequency, however, will lessen as a methodical treatment persistently hammers at causes and effects. In cases that have exhausted the patience of the patient, that have resisted all previous forms of or perfect rest from treatment, instances where the continued presence of the diseased gland plainly and palpably undermines what is left of the patient's chances for survival, the choice will lie between prostatectomy and suprapubic perineal through drainage.

As usual, a mutilating operation like prostatectomy, performed in accordance with the laws that have evolved from its frequent application, will not only be, relatively speaking, the easiest thing for the surgeon to do, but it is also the only means of relief for a patient whose prostate, like a chronically ill appendix, is worse than useless. The operation definitely maims the victim, but the disease has already anticipated that effect of the operation. In less desperate cases a suprapubic perineal through drainage operation might be our choice. Lydston claims good results from the method. The well-known beneficial effects of protracted drainage, putting the internal vesical sphincter out of commission for a time, the

always beneficial effects incidental to an enforced long rest and compulsory good behavior, will *à priori* support a plan which, in addition, permits of thorough palpation of bladder and prostate, and makes additional surgery manifesting itself possible.

Zuckerkindl, in presenting a patient with chronic prostatitis, on whose prostate he had performed bilateral excisions, opines that in such cases, on account of the loss of the sexual function, a total prostatectomy was not to be considered; indications were only for incisions, excisions, partial destruction of the organ. Operative intervention was only allowable in cases resisting all lesser forms of treatment, as in cases of retention or such suffering from chronic septic infection. In the operation he aims to save the ejaculatory ducts and the urethra. Cone-shaped pieces are excised to prevent the gluing together of the edges. Tamponade with moist iodoform gauze and permanent catheter. The microscope showed both pieces to be in a state of intensive chronic inflammation affecting equally the glandular and muscular parts. In the cortex the process was the most severe. Groups of glands were here, due to the massive infiltration in a state of purulent softening. Microorganisms could not be demonstrated.

Young (Baltimore) executed and advocated analogous procedures. When in doubt or fear of malignancy, early prostatectomy can be our only choice.

The less strenuous operation of perineal urethral prostatotomy combined with urethrotomy (internal and external) is our selection in those cases when a contracture or obstruction at the vesical neck coexists with strictures. A bilateral vasectomy in connection with this intervention, or as an independent measure, will await the action of our judgment.

Intrathyroideal parenchymatous injections, with a hypodermic syringe full of 5 % carbolic acid, have been a standard remedy at the Rush surgical clinic for a generation. In general, it must be said that parenchyma-

tous injections are losing favor in surgery; abscess formation, embolism, and no results being some of their drawbacks.

Neiswanger¹ observed five cases, three of which were physicians, some time after prostatectomy done by eminent surgeons, without their having experienced a particle of relief from the ordeal they had passed through. He also came across three failures following a Bottini-Freudenberg operation. One of these had a Bottini done three times, without experiencing any improvement. Another was fatal—due to shock.

Evidence of this kind stimulates our efforts at specific diagnosis, and invites our attention all the more closely to measures of a non-cutting, at least not mutilating, character.

Neiswanger, divides his cases into those of irritable prostate and hypertrophy, and lays claim to very successful results. The positive pole is applied, when the prostate is irritable, to the prostatic urethra.

A hard rubber tube of convenient caliber, shaped like an ordinary urethral sound, is tunneled through its entire extent, except at its conical terminus. The last 1½ inches are perforated by a number of small holes. A copper electrode, whose end has been wrapped in cotton and dipped in sterile normal salt solution, is inserted inside the hard rubber tube; the latter is then introduced into the urethra in such manner that the perforated part comes to accurately lie within the prostatic lumen. The negative pole may be applied perineally. The current of a strength of from five to ten milliamperes is allowed to continue for ten minutes, and may then be changed to the slowly interrupted faradic current for a period of from three to five minutes. The copper electrode is sterilized by heat; the rubber tunneled sound by washing it in water and soap, and rinsing, and allowing it to remain in 95 % carbolic acid for a few minutes. It is rinsed in sterile water before use. Sequences of this kind are time-taking, but have the advantage that but one visit a week is

¹ Lecture given during July, 1904, at the Illinois School of Electro-Therapeutics.

required. Three to five applications are necessary before visible and distinct improvement is manifested. Of course, he associated with this treatment the proper hygienic and dietary regimen, but claims to effect, even by depending upon this local treatment as the only intervention, a large number of successful results. The *rationale* of the treatment, it is explained, consists in the generation of a nascent oxychloride of copper in proper dilution that acts as an astringent and germicide. It is also possible that the galvanic current by its cataphoric action insures a deeper effect that medicaments superficially applied by any of the conventional methods.

He emphasizes the fact that this is not a *true* hypertrophy, which would mean an enlargement of the normal cells composing the glands, but rather an accumulation of tissue due to inflammatory action. In a true hypertrophy we have nothing to *destroy*, and whoever attempts it impairs the function of the gland. In the cases under discussion, however, we have something to destroy and, therefore, he applies in the same manner a solution of potassium iodide, about 25 grains to the ounce of water, with the negative pole in the prostatic urethra. A current of ten milliamperes is allowed to continue for ten minutes. The negative pole is used here for its softening effects; besides, the iodine, being electro-negative, is repelled by that pole and seeks to join the positive one, placed over the perineo-anal region. Thus the endeavor is made to bathe the gland in a solution of iodine. The slowly interrupted faradic current then follows, to stimulate the detrusor, as a molecular massage, to increase absorption of the products of decomposition set free by the first part of the application. Repeat in from five to seven days.

The writer's experience endorses the usefulness of this method of treatment.

General faradization has often been of benefit.

Intraprostatic Franklinism has come to the writer's notice by observing long sound-shaped glass rods in the drawers of the

offices of professional friends. Specific information, however of their indications and value was not obtained. A successful general practitioner and surgeon made credible assurances that ever since he treated his lady patients after inserting the conventional glycerine tampon to a static breeze or regular static treatment, they (his patients) had one and all expressed their satisfaction and professed more rapid progress of their respective cures. There is no one to doubt the harmlessness and generously good psychic effect of static electricity properly applied.

The writer had no opportunity to learn what evidence of progress phototherapy has to offer in the direction of prostatic therapeutics. The Roentgen ray has so far established no reputation of being able to successfully influence deep-seated parts, like the prostate.

The intraprostatic use of salves, medicated variously by means of cupped sounds and ointment syringes finds but few, if any, supporters of the day. The objections raised against their employment are that in their action they are difficult to localize; dirty; the instruments and salves troublesome to sterilize; besides, they do not contain any features that endoscopic application, instillations and injections of solutions are not possessed of.

Rectal suppositories are still rightly or wrongly universally applied. Ichthyol, ung. hydrarg., iodine, iodoform, euphphen, are the remedies of choice.

Positive evidence as to direct effects on the prostate aside from those on the rectal mucous membrane and defecation, and the psychic effect, is wanting. But authority supports their use. Even intraprostatic suppositories, called urethral bougies, the base being cocoa butter or gelatine, or such like, are seen to find a sale to physicians in the market. The same objections as those directed against salves would seem to apply. There is also good authority advocating the use of iodine, potassium bromide, and other agents in the form of solutions by means of rectal injections. It must be admitted the method is inconvenient, and the general con-

stitutional effects of iodine, etc., are as readily obtained by the oral exhibition of the drug. Besides, positive proof of more direct effect on the prostate of remedies thus exhibited is lacking.

The names of Oberlaender and Kollman are connected with prostatic instruments dilating and irrigating conjointly. Their action is manifold. In moderate distention their effect is somewhat akin to an intra-prostatic massage; the expressed follicular contents are immediately washed away. If a hot solution is employed, the beneficial, soothing, circulation-equalizing effects of heat come into play. If distended to the maximum of the patient's endurance, by a lucky accident, as it were, occluded or stenosed glandular orifices may be opened up to an extent sufficiently to effect proper permanent drainage subsequently. It is a little blind work, but surgery is nowhere excluded from this drawback at times. The intervals which must be allowed to elapse between séances with this instrument vary according to the extent to which the dilatation was carried, from one to four times a month.¹

Others have lauded prostatoscopic applications of guaiacol. The writer has found it to be a soothing remedy, gently stimulating the sexual function, and unaccompanied by any of the disagreeable temporary after-effects following the silver nitrate and strong bichloride solutions.

Burkhardt recommends applications of sublimate alcohol, 2 to 5%, by means of the prostatoscope. In severer cases he puts the patient in the hospital and cauterizes the caput with the thermo-cantery, followed by painting the surface with tincture of iodine. The extraordinary severe reaction ensuing puts off the next treatment for ten days. Four to five treatments are said to be followed by much improvement. The objection to the last procedure is the intolerable suffering the

patient is submitted to. Iodine in the posterior urethra in concentration always causes prolonged suffering as to urgency and frequency.

It is proper for us to always remember that not so infrequently the reputation of an author of a healing method is far superior to the merits or demerits of the method itself, and again we may not be capable of accomplishing by his method what the author does.

Progress is often expedited by changing the employment of the patient, as from a sedentary occupation to one requiring active exercise. To fill out intervals of periods when for reasons local treatment is or has to be intermitted, there is nothing like travel for the fastidious; in fact, for anybody; especially also when a depressed state of the mind and introspection call for measures of relief. Sanitaria and hospitals for ambulatory cases are not looked upon as desirable places; for the patient needs wholesome and purposeful employment, or, if not working, the rapidly changing scene of travel will prove of infinitely greater advantage. The ordinary expectant, masterful inactivity, or do nothing method of treatment is with regrettable frequency often adopted by the patient himself, who so long as there is nothing doing, dispenses with the expense and inconvenience of having an attendant watch to see what an outcome the natural unassisted forces of nature may have to show. The advertising charlatan who treats patients by mail and sends out harmless, colored and a little bitter tasting water, and pills, and perhaps a few suppositories and bougies, is also treating the patient on the expectant plan. He expects a great deal of nature, for diagnosis, and individualization of treatment are none of his concerns.

With wonderful unanimity all writers uphold systematic prostatic massage.

Feleki found gonococci nine years after infection in the prostatic mucosa. Zuckerkandl found the excised pieces of a case of prostatic disease of long years' standing sterile. The writer recently examined some prostatic secretion of a case of three years'

¹Sharp and Smith have manufactured an inexpensive irrigating dilator, needing no rubber cover, according to a design submitted by the writer, who adapted a Leonard uterine dilating irrigator to prostatic usage. The writer happened to see irrigating dilators sold under his name by other firms, which had not, however, followed out strictly and in detail the author's model.

standing, and found it to be absolutely sterile, as far as a microscopic examination proved.

The presumption is fair, perhaps, that the infection, in so far as it exists, is confined to the surface, the rest of the gland, as a rule, being sterile. Most chronic abscesses are sterile. So we do not rub microbes around when massaging a prostate (as a surgeon of international reputation once remarked to the writer), but we express follicular contents, that for anatomical reasons, cannot any more of their own account empty themselves. Digital massage acts as an intermittent drainage, equalizes the circulation, stimulates the involuntary muscles and nerves, and promotes thus absorption. Patients almost always express gratification for the comfort thus gained. That perineal pain is lessened, etc. Once a day is not too often, if the time can be found.

Feleki has devised an instrument, shaped so the patient can employ it himself for auto-massage. He claims extraordinary good results in his cases. Of late, vibratory massage, an electrical motor being the power, has been lauded here and there. The writer's experience does not enable him to give any endorsement whatsoever to this method, as applied to the prostate. Vibratory massage is a valuable measure for many cases of rectal disease, but properly massage the prostate it cannot.

To sterilize the surface, stimulate leucocytosis, soothe the exposed nerve endings, and promote normal epithelialization, we have recourse to instillations, preferably applied by means of Guyon's bulbous catheter. The Ultzmann silver catheter syringe, the prototype of the Guyon instrument, was useful in showing the way; but the localizing bulb, elasticity and non-irritability of the Guyon catheter have displaced this one-time much valued instrument.

The patient empties his bladder: the catheter is introduced just beyond the compressor urethral muscle; the last few drops of urine allowed to escape, and $1\frac{1}{2}$ to 2 drams of solution instilled. To prevent the ever-present few drops of urine from so af-

flecting our medicament as to make it worthless, as well as to cover the pathologic area, it will be necessary to instill more than just a few drops, and also to have our solutions of such chemical constitution that urine will not at all or at least not immediately decompose them. (We must go to ophthalmologists for the purpose of viewing the extraordinary beneficial effects of persistently applied medicaments to chronic diseases of the conjunctiva and cornea, and learn the difference of action between those various remedies, always subject to visual control.)

Argyrol, 15% solution; protargol, 10%; mercury bichloride, 1-20,000 to 1-10,000 in normal saline solution; collargol, $\frac{1}{5}$ to 2%, answer these requirements, and are non-irritating. In suitable cases and doses they enhance the physiological forces and the immediate comfort of the patient. Argent. nitry. in 1% less or stronger solutions is always irritating, but its secondary effects are as good as its reputation here is time-honored. Cuprum sulphate appears always very irritating, and applicable only in exceptional cases. All vegetable agents like ergot, hamamelis, tannic acid, hydrastis, kino, krameria, depend on their superficial astringent effect principally, and are not antiseptic or alterative. Their use appears to be very limited. Neither have insoluble substances like bismuth subnitrate, on account of their danger of permanent precipitation, found much favor.

Goldberg, Cöln have shown by elaborate experiments and contemporaneous literature that the best, not to say the only, way to effect absolute sterilization is, as we all know, by boiling the catheters, etc. We will therefore boil everything that is to be used. If, however, what of course should never happen, the busy practitioner did not have time to boil, the writer would suggest the following plan as better than nothing, and minimizing, if not excluding, danger from the use of an infected catheter. The lumen of the catheter is held after use immediately underneath the running hot water faucet for two minutes or so, and washed without soap. A 1-1,000 solution of

oxycyanide of mercury with borax is then several times injected through its lumen, and a copper wire previously sponged with the same solution introduced throughout its length. The catheter, whose external surface has been thoroughly sponged with the mercury solution, is placed in a clean glass tube, corked at one end, when the latter is filled with the mercury solution, and now corked at the other end also. A catheter, after having remained in that solution and thus kept for twenty-four hours, and for twenty-four hours longer in the same glass tube without the mercury solution, the corks having been replaced by cotton, was found to be sterile.¹

Changing off with instillations or preceding them, comes the employment of the sound; always temporarily grateful to the patient. The sound distends the whole of the urethral canal, and acts in part as an intraurethral massage and part as dilator, promoting absorption.

The psychophore does not commend itself for our endorsement, for the reason that the frequent exhibition of an intraurethral instrument by the patient himself would even after teaching asepsis soon lead to additional infection; but apparatus² by means of which first hot and finally cold water can be applied to the prostate, per rectum, by the patient himself, has all arguments in its favor. It forms one of the most important parts of the treatment. The continuity of effect, if faithfully employed by the patient once or twice every day, has the most beneficial results. Perineal counter-irritation, especially at the always recurring times of exacerbation,

by means of tincture of iodine, has proven a useful and trustworthy adjuvant.

As to sexual intercourse among the married, absolute continence must be counselled so long as patients feel in any way the worse after the act. Otherwise an economical use of this function at rare intervals may seem the better plan. The sexual organ massages the prostate in a manner that none of the artificial mechanics or decongestants in any way can expect to equal. It is a case of nature versus art. Note the difference in the amount of expressed secretion in a patient affected with prostatorrhea if massaged before or within ten hours after sexual congress.

The all-powerful influence exerted by sane ways of thinking, associating, working, eating, drinking, exercising (exercise by walking on rubber heels briskly, and a comfortable distance is one of our standbys), sleeping in ventilated rooms, must be mentioned, because so obviously and constantly disregarded. The daily morning bath, as cool as the patient can stand comfortably, deserves especial mention. Rhubarb, tea and coffee, on account of the large amount of oxalic acid and tendency to lime oxalate stone formation, should be discriminated against. Indeed, had the patient lived right in the first place, there would hardly be any excuse for this paper. If the patient is a drinker or smoker, he must gradually be instructed to appreciate the deoxidizing injurious effects of these slovenly and demoralizing habits.

Prostatics must limit their meat supply and always eat a little less of everything than their appetite calls for. The bowel function is kept normal by eating slowly, fruit, and proper exercise; perhaps daily bowel washes for a period. Pills and physics are tabooed, as a rule. Of internal specific medication, so far as the prostate is concerned, no remedy has proven incontestably any claim for such a place. Ergot does not contract disorganized muscles. Yet one studying Livingston's article would feel tempted, especially in the neurotic variety of prostatics, to employ ergot according to his specific directions. Saw Palmetto does

¹ Columbus Medical Laboratory, Chicago, August 18, 1904. Dr. F. A. Leusman:—Dear Sir; The specimen of instrument from—shows the entire instrument was sterile outside as well as the lumen. Very Respectfully,
Columbus Medical Laboratory.

² Sharp and Smith have manufactured, according to the writer's design, an instrument similar in outline to Kreis's that can be used as an apparatus for conveying the effects of heat and cold as well as for auto-massage of the prostate. It can be had with a single or double outlet tube. The latter pattern is the more desirable one. The patient prepares two 1 gallon fountain bags—one filled with hot water and then connects the rubber tubes with the inlets, and can thus with the help of stop-cocks alternately or successfully apply the beneficial effects of heat and cold in the most convenient manner possible. It is equally efficient for auto-massage.

seem to stimulate the sexual function, but we are warned not to use the drug for too extended a period, because it will influence the kidneys. In other words, it is an irritant and of very limited, if any, use. The balsamics, such as oil of sandalwood, etc., are out of the question in chronic cases. The reconstructives, like maltine, hypophosphites, good cod liver oil during the winter in the case of the emaciated: digestants when indicated, even strychnine in the atonic, intermittently, may be fully advised. During periods of exacerbations sodium or potassium bicarbonate is grateful to an individual tantalized by frequent and painful micturition. Sodium bicarbonate, less efficient than the potassium bicarbonate, disturbs the stomach less. Urotropin (and its congeners) is badly borne by chronic use, nor does its chronic use seem to influence prostatic conditions: the more chronic the prostatique, the better is he off without it.

Camphor monobromide and sodium bromide for sedating the nervous system of these unfortunates and quieting the at times abnormal sexual impulse, are among our standard remedies exhibited at intervals.

A suppository containing 10 grains of antipyrine has proven of value by relieving exacerbation of prostatic pain felt in the rectum, the patient using one to four a day at such times, and stopping their use immediately when amelioration occurs. Suppositories containing opium, morphine, belladonna, hyoseyamus, cannot too strongly be warned against on account of the inhibitory action which they exercise on the kidneys; never quite normal, and frequently already varying states of pyelitis, nephritis and renal insufficiency.

Like a preparatory, efficiently performed trachelorrhaphy and perineorrhaphy in gynecology, or a bilateral radical tonsillectomy in naso-pharyngeal catarrh, have oftentimes improved the patients to such an extent as to make further measures contemplated unnecessary by reason of the wonderful improvement following these preliminary operative proceedings, so, in an analogous

way, prostatics have often hardly needed any further treatment after properly executed urethrotomy, internal or external, as the location of the strictures demands, varicocele and phimosis operations, vasectomy and rectal trimming. The writer wishes, from the experience gained in his own practice, to substantiate this well-known clinical fact of great benefit following such intervention. If strictures are cut, sounding for one year must follow.

In conclusion, a few cases occurring in his private practice have been appended for illustration.

Mr. H. N., referred by Dr. Bervin; aged 18; clerk, scarlet fever at 13; emaciated; unable to work for the past two years; three or four attacks of hematuria. Examination showed very muddy urine, tender prostate, uneven in contour and consistency; left vesicle enlarged. Heller's test marks a quarter inch albumin, a few hyaline and granular casts. Complains that he had to pass water every hour at night; when trying to pass water the stream would be intermittently shut off several times. Several months sounding had produced no benefit. Internal urethrotomy at office, March 20, 1903. Cut all strictures properly, followed by immediate relief from cysto-spasm; urine cleared up six months after operation. About February 25, 1904, when the writer demonstrated the patient before the Chicago Urological Society, an ulcer could be seen larger than a five cent piece, with irregular border radiating in various directions, located at about the middle of the vesical mucosa lining the anterior wall of the bladder; posteriorly above laterally to the trigonum the vessels could not be seen in places, that appeared of a very dark red color in marked contrast to the normal light yellow shade. The assumption of a submucous hemorrhage might serve to explain the cause of these dark places; receives from now on a three ounce intravesical injection of hot collargol solution, 1-1500, three times a week. September 25th, 1904: Patient looks well nourished; no albumin; feels well and strong, after continuous treatment with daily morning bath, little or no

meat diet, plenty of milk and raw eggs, raw fruit, bread and butter, no tea or coffee, Epsom salts twice a week, never ceasing stream of reconstitutives; takes ichthyol now; passes water once at night; is well satisfied with progress. Ulcer healed.

Mr. E. Z. W., bookkeeper; 28; single; six feet, two and one-half inches; 145 pounds; referred by Mr. Carl Grenaeus; medical student. When first seen, May 14, 1904, he complained about morning drop, with increase of this discharge after sexual intercourse; every day intermittent pain felt one inch from meatus on dorsum of penis. Pain like prick of pin on sitting down; sensation of heat; occasionally pain and very rarely pulsation back of scrotum in front of anus. After sexual congress all these complaints increased, even erections would make them worse. General health failing. No consumption in family. Six years ago had gonorrhea. Suffered a second attack four years ago. Last time he was thus afflicted (so he thinks), ten months ago. Observed cloudy urine for past year and a half. Thinks his prostatitis due to strong injections.

Examination revealed strictures in anterior urethra, bilateral varicocele with sufficient subjective symptoms to compel him to wear a suspensory bandage; enlarged (size of pigeon's egg) and tender left inguinal gland, and a well-marked case of hemorrhoids, and anal fissure. Tender, irregular, enlarged prostate; tender and palpable vesicles. August 10, 1904: Operation, at German-American Hospital. Resection of both varicoceles; removal of inguinal gland; internal and proper urethrotomy of all strictures; removal of hemorrhoids and fissure by clamp and cautery. Attempt at violent hemorrhage after stricture cutting; immediate control by manual pressure. Special nurse with patient for two days and nights; instructed to apply manual pressure the moment bleeding began. Chloride of calcium in twenty grain doses in water, four to six times a day, for two days. Patient lost only a little blood when urinating. Primary union. Patient left hospital ten days later.

September 24th: Much improved; morn-

ing drop gone; sounding continued; uses the writer's prostatic hydrophore and auto-masseur. Prostate and vesicles have lost their tenderness. Takes ichthyol. Morning bath (cool), and simple fare. Deep breathing; energetic walks; sleeps with open windows.

November 22, 1904: Appendectomy at German-American Hospital, of four inch long appendix, distended with fecal matter. Left hospital in eight days.

Mr. A. H. F. McG., referred by a former urethrotomized patient; Akron, Ohio; thirty; manager of factory; single; principal complaint, when desiring to pass water, the stream shuts off on him, and he has to wait minutes before it will start again. General health failing. One of the previous physicians had diagnosed stone in the bladder. Examination shows strictures of 39 F. caliber; 38 bulbous bougie would not discover them. Tender prostate.

April 25, 1895: Internal urethrotomy and rectal trimming at Passavant Memorial hospital. Dr. Waters, who was present, and then Dr. Fenger's assistant, remarked that Dr. Fenger would not cut a urethra admitting a French 38 sound easily. The writer replied that he regretted to place his indications for operative intervention in this case in opposition to such weighty authority; yet, as it was he had formulated some conclusions on personal experience and judgment, he would therefore proceed according to the latter. All strictures properly cut. Patient left hospital after two weeks' stay. Immediate relief of cysto-spasm. Patient seen again one year later, looking and feeling well, pleased with results, and presented his bride.

Mr. L. V. B. R., aged 15; gonorrheal posterior urethritis for past three months or more; muddy urine; rest in bed at Passavant Memorial Hospital from January 8th, to January 24th, 1903. Liquid diet; salines; bowel wash; ichthyol suppositories; Ol. Santali in twenty minim doses three times a day. Subjective symptoms very slightly improved; urine remains muddy; resumes clerking; no improvement: retires to a ranch three

months later. Two months' ranch life and work cured him.

Mr. F. K., referred by Dr. E. J. Fiseher; politician; 29; looks the picture of health, January, 1898; hot prostate; muddy urine; intolerably frequent micturition. Sounding; Guyon's silver instillations. August, 1898; internal urethrotomy and rectal trimming at Augustana Hospital. Improvement of subjective symptoms. Presented patient before Chicago Medical Society some time in 1900. Continued treatment with sound, irrigating dilator, Guyon's instillations, massage, pichi, urotropin, no meat, affecting amelioration to the extent that in place of getting up every hour at night to pass water he could manage with from one to two risings. Patient stopped treatment December, 1903. Seen September 23, 1904. Has to rise three to four times at night; urine clear; got married a few days ago.

Mr. G. W.; 50; school superintendent; single; no residual urine; hot prostate. Bilateral vasectomy, German Hospital, Nov., 1898, followed by treatment individualized to the patient. Dismissed improved.

Mr. J. W.; 34; assistant superintendent. Resection of varicocele; internal stricture operation; rectal trimming at German Hospital, June 13th, 1900. Had been ill then with prostatitis for twelve years. Last seen Sept. 24, 1904. Prostate still very tender; patient entertains idea of prostatectomy, but the writer's judgment does not as yet favor this operation.

Mr. G. E. G.: referred by Dr. Hunne-
mann; aged 30; mechanic. Gleet and sexual weakness of several years' standing. Internal urethrotomy at office, 1902. Sounded and massaged prostate for a little more than a year, when patient declared himself well.

"Myself when young did eagerly frequent
Doctor and Saint and heard great argument
About it and about: but evermore
Came out by the same door wherein I went."

"With them the seed of wisdom did I sow,
And with mine own hand wrought to make
it grow;

And this was all the harvest that I reaped—
I came like water and like wind I go."

—Omar Khayyam.

"All great literature is skeptical. I mean that the highest dramatic or poetic composition has for its central figure or hero a skeptic, as, for instance, the Prometheus of Aeschylus, who defied Zeus; the Faust of Goethe, the Hamlet of Shakespeare, the wonder-working Magician of Chaldean and the Manfred of Byron."—Mangasarian.

Bibliography.

- Furbringer: Die Störungen der Geschlechts-
function des Mannes.
Tillmann: Lehrbuch der Speciellen Chirurgie.
Hutchinson: Brit. Med. Jour., Oct. 19, 1901,
p. 1134.
Voelcker and Joseph: Munchen. Med.
Wochschr., No. 48, 1903.
Goebel: Ibid. Ein Beitrage zur functionellen
Nieren Diagnostic.
Livingston: Ergot in General Practice, Jour.
Am. Med. Assn., August 27, 1904.
Gerrish: Textbook of Anatomy by American
authors.
Hutchinson: Food and dietetics.
Fenwick: Ureteric Meatoscopy in Obscure
Diseases of the Kidney, 1904.
Feleki: Centralblatt f. d. Krankh. der Harn.
u. Sex. Org., 1895, vol. 5.
Socin and Burkhardt: Verletzungen und
Krankheiten der Prostata, 1902.
Wossidlo: Chronic Prostatitis and its Treat-
ment. Jour. Am. Med. Assn., Aug. 27, 1898.
Toldt: Anatomischer Atlas.
Porosz: Monatsch. f. Urologie, 1903, v. 8,
Heft 2.
Swinburne: Am. Medico-Surg. Bulletin, N.
Y., 1896, Vol. 9.
Richter: Deut. Med. Ztg., 1903, Vol. 22.
Chute: The gross pathology and mechanism
of prostatic obstruction. Boston Med. and
Surg. Jour., Apr. 28, 1904.
Mutz: The bladder in case of prostatism
without enlargement of the prostate. Annales
des Mal. Genito-Urinaires, Paris, xxi, No. q4.
Wiener: Suprapubic Prostatectomy under
Nitrous Oxide Anesthesia. Jour. A. M. A., May
14, 1904.
Goodfellow: Median Perineal Prostatectomy.
Jour. A. M. A., July 16, 1904.
Fuller: A new operative method to expose
the seminal vesicles and prostate for purposes
of extirpation and drainage. Jour. A. M. A.,
May 4, 1901.
Ochsner: Clinical Surgery.
Ferguson: Med. Perineal Prostatectomy.

Jour. A. M. A., Feb. 22, 1902.

Watson: Operative treatment hypertrophied prostate. *Annals of Surgery*, June, 1904.

Billings: Diagnosis of Pulmonary Tuberculosis. *Ill. Med. Jour.*, Sept., 1904.

Murphy: Prostatectomy. *Jour. A. M. A.*, May 28, 1904.

Delagrammatica: *An. des Maladies des Organes Genito-Urin.*, Paris, 1900, F. 18: 599.

Dorst: *Ibid.* 1901, Vol. 19, p. 1355.

Le Fur: *Ibid.* 1903, F. 21, 1673.

Preble: Treatment of pulmonary tuberculosis. *Ill. Med. Jour.*, Sept., 1904.

Belfield: Diseases of the Prostate. *Morrow's System*.

Lydston: Prostatitis, Twentieth Century, Vol. 1.

Ciechanowsky: Anatomische Untersuchungen Prostate Hypertrophy. *Greutgebiete der Med. und Chirurgie*, 7, Band, 1900.

Keyes: Genito-Urinary Diseases, 1903.

Fuller: Diseases of the Genito-Urinary System.

White and Martin: Genito-Urinary and Venereal Diseases.

Zuckermandel: *Wiener Klin. Wochenschrift*, 1903, p. 1412.

Finger: Gonorrhea and its Complications.

Casper: *Lehrbuch der Urologie*, 1903.

Zeissl: *Diagnosis und Therapie des Trippers*, 1903.

Szymonowicz: Histology and Microscopic Anatomy.

Goldberg: Die Verhütung der Harn Infektion, 1904.

Eberth: Die Maenlichen Geschlechts Organe, 1904.

Frisch: Die Krankheiten der Prostata.

Hawley: Primary Carcinoma of the Prostate. *Annals of Surgery*, June, 1904.

Broome: Anatomical and Clinical Study of Two Hundred Post-Mortem Specimens of Prostate Hypertrophy. *Interstate Med. Jour.*, March, 1904.

Freyer: Enlargement of Prostate. *Lancet*, Jan. 19, 1901.

Posner: Diagnostik der Harnkrankheiten, 1902.

Kapsammer: Nierenchirurgie und funktionelle Diagnostik. *Wiener Klinische Wochenschrift*, No. 28, 1904.

Robinson: *American X-Ray Journal*, August, 1904.

Cathelin: Cancer of left kidney: endovesical separation of the urines. *The American Journal of Urology*, No. 1, 1904.

Caspar: Diagnosis and Treatment of Tuberculosis of the Kidneys. *The Amer. Jour. of Urology*, No. 2, 1904.

Richardson: The development and anatomy of the prostate gland and its diseases and treatment. *Heath Scholarship Prize Essay*, 1904.

Discussion on the Paper of Dr. Frederick Leusman.

Dr. —————: I want to emphasize one or two points brought out in this paper. As the essayist has said, we must pay some attention to the patient's own description of his feelings and sensations, although the pa-

tient's vocabulary is sometimes inadequate to express some of the sensations he has. Patients with prostatitis have a good many symptoms, and only by paying attention to their description of the symptoms can we treat them intelligently.

Notwithstanding the universal popularity of prostatic massage, there are some cases of prostatitis that are not benefitted by it, even after prolonged treatment, and many patients are made to feel worse for a considerable time thereafter, and in those cases in which massage seems to do damage, it should be discontinued.

I would like to emphasize the beneficial effect of hot rectal injections in these cases, as I believe they do more good in prostatitis than anything else I have tried. In fact, I think nature has a good deal to do with the healing of prostatitis, and the physician can help nature along by teaching the patient how to use these injections per rectum. The water should be applied as hot as can be borne, say 120 degrees Fahrenheit, and in my own experience I have found in most cases that hot water is more beneficial than cold. In these cases there are varied kinds of pain and discomfort, and it is necessary to take considerable time, if the patient expects to get well. He should take a hot rectal injection whenever he feels discomfort in the prostate, the rectum, anus, perineum, or wherever pain happens to be situated. Not only the local effect of hot water is beneficial, but the injection washes away small particles of feces, and it is astonishing what suffering the feces sometimes cause in cases of prostatitis, but I do not think it is advisable to give cathartics too freely, because they cause constipation, and this in turn produces a tenesmus, which is almost as painful as the presence of feces.

Discussion on the Paper of Dr. Frederick Leusman.

Dr. A. W. Baer: If I understand the Doctor's paper rightly, it was a plea for prostatic massage in preference to the knife. I do not know which is the worse. I do not see how, in the majority of cases, massage would be beneficial outside of relieving the follicles that were engorged, and it would be hard to depend upon the patient to do that with any instrument. One would have to do it with the finger.

The static treatment was mentioned, with high frequency, as being beneficial in these cases. Personally, I use the continuous current as employed by Neumann, in cases of urethral strictures, and have always used the negative pole. From analogy, one might reason that the positive pole would be more beneficial because of its stimulating action, but it will always contract the urethra, so that we will have to take the urine away by means of a catheter, and the negative pole, in the majority of cases, gives more relief than anything I have used.

Dr. A. H. Ferguson: I was very much pleased with and interested in the paper of Dr. Leusman. It has brought forth a great number of points that are of interest to the general practitioner, to the genito-urinary surgeon, and to

the general surgeon. I was also pleased to notice that he made reference to the work of Ciechanowski, with regard to the etiology of hypertrophy of the prostate, and if we consider prostatitis, whether acute or chronic, to be due to some infection, as he and a number of others maintain, then we have to treat prostatitis from the beginning to its termination as an inflammatory condition.

For practical purposes we should divide inflammation of the prostate into two great classes, and subdivide them, namely, the acute and chronic.

The remarks that have been made already with regard to the treatment of acute cases—rest in bed, internal medication, alteration of the acidity of the urine, rectal injections, etc., in place.

Then come the subacute cases, which pursue a chronic course, and the treatment that has been outlined by Dr. Leusman is all right. I have had a number of cases of prostatitis where I hesitated to recommend radical procedures, as for instance, in men forty years of age. In some of these cases irrigation, getting rid of the foul residual urine, and relieving irritation around the neck of the bladder and prostate, will allow these men to go on with comfort for months and months. We follow the case up, we may introduce sounds and use electricity, and yet in spite of everything we do or everything that has been done in that line, the enlarged prostate persists and obstructs the urinary flow. Then the indication for catheter life or prostatectomy is presented I advise the latter as the safer of the two, and this only rational treatment. How does it obstruct urinary flow? It may be by a bar; it may be by an enlargement of the middle lobe; it may be by an enlargement of one or both lobes pressing in towards the other and compressing the urethra laterally, and then what have we to do?

The Bottini operation, has a very limited field. It has had its initiation, its rise and its fall, and in the struggle of its fall it has hung on to a few pathological conditions in very old men, who cannot stand an anaesthetic, where the operation is done simply for the severance of a bar, but not for the removal of an enlarged middle lobe, not where the enlargement is overhanging the prostatic urethra; not where the enlargement is lateral. The Bottini operation in such cases is worse than useless. It is simply dangerous. Then what have we to do? We have to remove the prostate.

In an experience embracing sixty cases operated by the perineal route, and twenty-six by the suprapubic, I prefer the former because I have lost less cases by it than I have by the suprapubic route. It is unnecessary for me to go into the method of performing the operation at this time, which means the development of prostatectomy. Suffice it to say, after the removal of the two lateral lobes the ejaculatory ducts ought to be avoided first. Then I prefer a median incision, so as to avoid these ducts getting into the bladder, and removing the middle lobe. You can remove the middle lobe in one of two ways, and one is

to go directly inside of the bladder through the prostate urethra, and internal vesical meatus, and attack it from within. With small pedicle, or even with one of considerable size, you can thus successfully take it away. If, however, the middle lobe is broad, you had better reach it from below the prostatic urethra, and follow through its substance and remove it without going into the bladder. Then come the overhanging portions of the middle lobe, which block the internal meatus. These had better be removed laterally, following the prostatic urethra to one side or to the other, or to both.

A great deal could be said with regard to the different methods of technique that have been proposed, and of the different ways in which the after-treatment should be carried out, but my time is up. This subject requires much serious consideration on the part of the whole profession.

Dr. Leusman (closing the discussion): I wish to thank those gentlemen who have taken the trouble to discuss my paper. I have not very much to add to what I have already said, as the paper embodies some of the conclusions I arrived at some time ago in regard to this subject, and I could not and do not expect to come before a body of men, read a paper rapidly, and expect them to grasp its meaning as well as the man who wrote it.

In reference to the remarks made by Dr. Baer, I did not make a plea for massage of the prostate, but the principal object of my paper was to **bring before your vision** the different forms of prostatitis and their treatment, and in doing so I took a little different course from what is usually pursued, namely, instead of beginning with injections and winding up with prostatectomy, I thought I would begin with prostatectomy and wind up with injections.

As to the remarks made by Dr. Ferguson, he knows what he is talking about when he referred to the use of drugs, but I did not go into that phase of the subject, dealing with the choice of forms of prostatectomy, nor did I go extensively into the details of any mode of treatment, but simply tried to bring out the choice of methods, and when to apply them, and this is of interest not only to the surgeon, but the patient also has something to say about it. It was only yesterday that I met a professional friend of mine at Sharp & Smith's, who knew I was going to appear here to-night, and he said to me, "What do you do when you remove a prostate and the patient returns to you a year later and you find you cannot get any kind of instrument in the prostate?" I said to him, "I always think twice before I cut a prostate out." And that is the way I treat my urethrotomy patients. I sound my patients at intervals for one year afterwards. If you cut a stricture or remove a prostate, you should sound your patient at intervals for one year afterwards, and you will have no recurrent strictures. You must individualize your treatment.

I do not wish to be understood as supporting massage of the prostate and saying that it is the only remedy in these cases. It is only one

of the many forms of treatment of this disease. I am not one of the medical Popes, and while I think a good deal of benefit may be derived from the wise use of massage, I want to say that massage alone does not effect a cure in these cases. It may help to bring about a marked improvement in suitable cases. Furthermore, I think Drs. Ferguson, Ochsner, and Dr. Murphy, and many others will agree with me and support me in saying that prostatectomy does not always cure. Remember that. No, prostatectomy does not always bring about a cure. It sometimes makes patients worse than they were before. It is not a sure thing, by any means.

If I were certain that prostatectomy would effect a cure in all cases, I would cut out all other forms of treatment I have mentioned and throw them away.

As to hypertrophy of the prostate and prostatitis, I think I made a clinical distinction between the two. The case may be considered one of hypertrophy of the prostate when we have a residual urine of four or more drams, and a case may be considered one of prostatitis when we have less than that amount or no residual urine. If a case is one of prostatitis, and does not get better by other methods of treatment, then I say, "Out with the prostate." I thank you.

I also wanted to state that hot water injections of the rectum do not and cannot take the place of instruments that convey cold or heat there, without soaking and deranging the rectal mucous membrane.

DR. J. B. MURPHY'S TECHNIC FOR ABDOMINAL HYSTERECTOMY.

BY JAMES M. NEFF, M. D., CHICAGO.

The method of abdominal hysterectomy herein described has been used by Dr. Murphy for the past two and a half years. It so greatly simplifies the operation and possesses so many points of advantage over the commonly accepted methods that we have become convinced of its superiority.

The generally adopted line of procedure, from the anterior side of the uterus, involves a number of difficulties and possible dangers which we believe are obviated by the newer posterior method. The most serious of these is that of injury to the ureters, which lie close to the sides of the corporo-cervical junction and anterior to it. Because of their proximity to the uterine, one of the ureters may be included in the mass ligature, when the latter is passed around the

uterine artery from in front or it may be divided by the anterior incision through the corporo-cervical junction. That these accidents are possible is proven by the fact that certain advocates of the anterior operation, place catheters in the ureters as a preliminary procedure.

Another danger in the anterior method is the occurrence of secondary hemorrhage, caused by the slipping or loosening of a mass ligature, which includes not only the uterine or ovarian arteries but a considerable quantity of the surrounding connective tissue. This is more likely to happen when cat gut is used than with inabsorbable materials as the cat gut is quickly attacked by the tissues and becomes soft and slippery within a short time after its insertion: even chromicized cat gut may be irregularly absorbed and give way before coagulation has taken place in the vessels.

The ideal method of controlling hemorrhage from the uterine and ovarian arteries, therefore, and the one which we employ in this operation, is the ligation of the isolated vessels. This renders secondary hemorrhage practically an impossibility.

The technic of the posterior operation in detail, is as follows:

(1) *Aseptic preparation of the abdomen and vagina.*

(2) *Trendelenburg position.*

(3) *Abdominal incision.* A vertical incision, 5 to 8 inches long, is made through the inner border of the sheath of the left rectus muscle. The fibres of the muscle are separated with the handle of the scalpel and the peritoneum divided on the slant between the two tissue forceps which hold it. The incision is never made through the linea alba and no muscle fibres are cut.

(4) *Examination of the pelvic organs.* The uterus, ovaries and tubes are carefully examined, to determine the exact nature and extent of disease and the line of procedure to be followed.

(5) *Protection of the general peritoneal cavity and displacement of the intestines out*

of the field of operation. This is accomplished by means of laparotomy pads.

(6) Separation of adhesions, if any exist, between the uterus and surrounding structures. If the omentum is adherent it is ligated close to the uterus and divided. Intestinal adhesions are separated by blunt dissection, care being taken to always work in

the tissue is friable, or if the 'operation' is done for cancer of the cervix where the fundus is not enlarged, heavy vulsellum forceps can be used to better advantage.

(8) *Clamping the broad ligaments.* By forward and downward traction on the "cork screw" the uterus is drawn into the abdominal incision with its posterior surface upper-

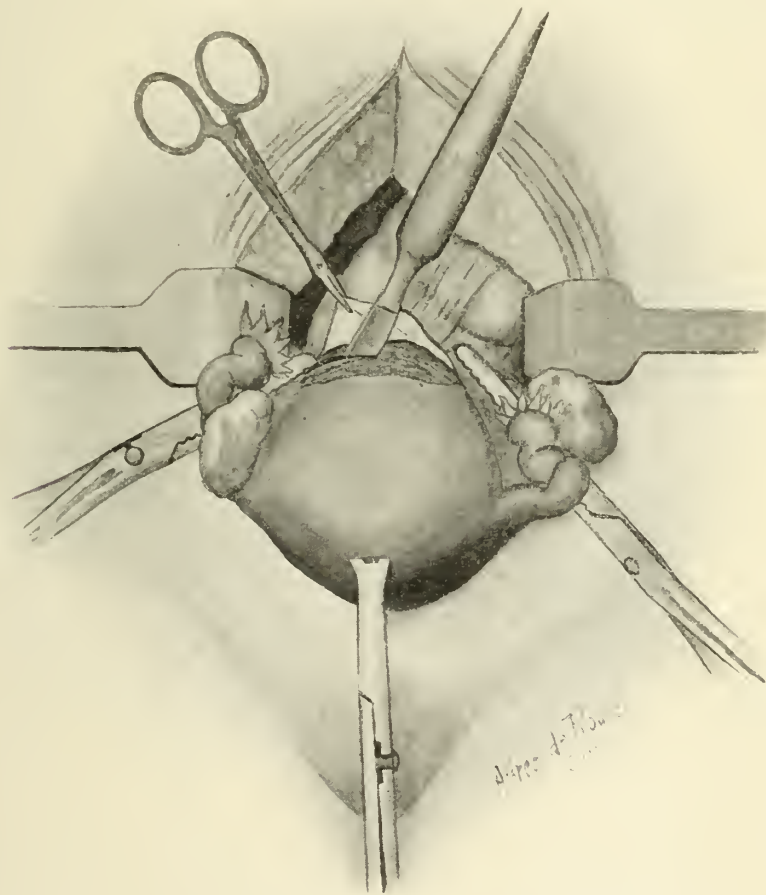


FIGURE 1.—Showing posterior incision through the corporo-cervical junction.

the direction of the adherent coil, thereby adding to the thickness of the intestinal wall and avoiding perforation.

(7) *Securing control of the uterus.* For this purpose we use a large "cork-screw" which is inserted deep into the upper portion of the myomatous uterus. If the uterine fundus be the seat of malignant disease, and

most. Long heavy hysterectomy clamps are now applied to the broad ligaments close to the sides of the uterus, the ends of the blades extending down to the corporo-cervical junction but not including the uterine arteries. There is no danger of injuring the ureters in this step of the operation if care be taken to place the ends of the clamps in direct con-

tact with the uterus, above the level of the arteries.

If the tubes are diseased they are removed with the uterus by dividing the meso-salpinx of each before applying the clamps to the ligaments. If healthy, however, their uterine ends may be included in the grasp of the forceps and both tubes allowed to remain. In

(9) *Division of the broad ligaments.* The ligaments are divided with the scissors $\frac{1}{4}$ inch to the inner side of the clamps and the uterus, which is now liberated from its lateral attachments, is rotated downward and forward by traction on the "cork screw." This brings the posterior surface well into the fields of operation.

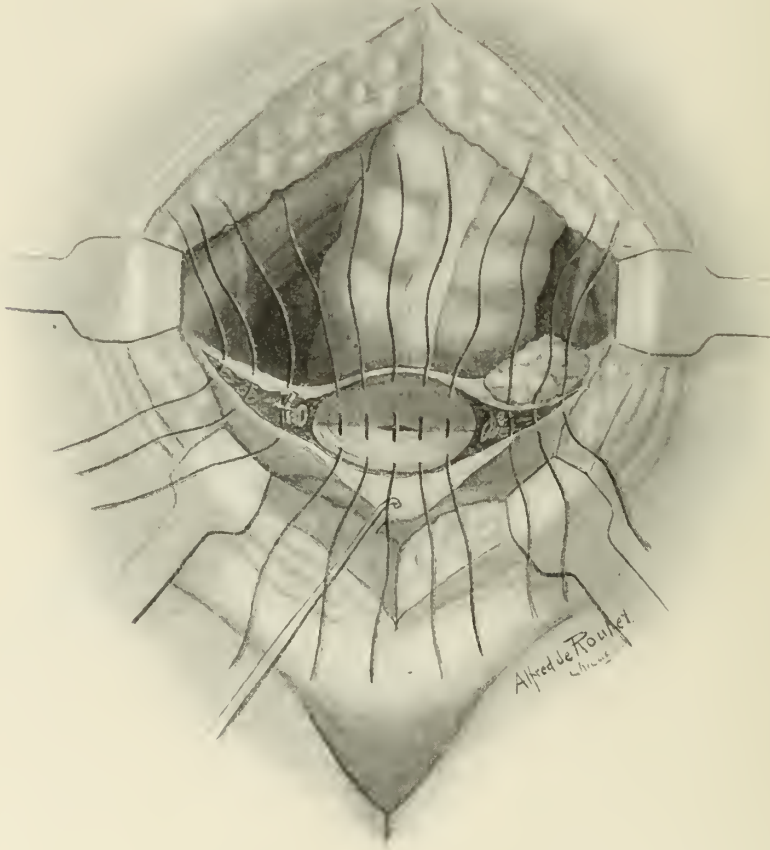


FIGURE II.—Showing the cervical sutures in place.

patients who have not reached the menopause the ovaries, or at least one of them should always be retained. This is absolutely essential to the future welfare of the patient and is nearly always possible. Even when both ovaries are diseased it is possible by resection of the affected parts to preserve a portion of one or of both.

(10) *Incision through the corporo-cervical junction.* A transverse incision is made with the scalpel into the posterior wall of the uterus at the corpo-cervical junction (Fig. I.) and the cut edge of the peritoneum is secured with artery forceps. This incision is directed forward and slightly downward as far as the cervical canal, the division of the

tissue being aided by strong downward traction on the fundus. The uterine arteries now come into view on each side and are secured with artery forceps before they are cut. Should they not be plainly visible however no time is spent in looking for them. From the level of the canal the incision is continued through the cervical tissue, the operator drawing the uterus forward as he proceeds and rolling it away from the anterior peritoneum and bladder. In this way

(12) *Suture of the cervix.* The wedge shaped gap in the cervix is closed with interrupted cat gut sutures, which approximate the cut surfaces but do not include the peritoneum. (Fig. II.)

(13) *Treatment of the broad ligament stumps.* The broad ligament stumps may be treated in two ways: (a) By ligature *en masse*, (b) By ligation of the individual vessels. The later method we consider prefer-



FIGURE III.—Showing the cervical sutures tied and abraded surface covered with peritoneum.

a peritoneal flap is formed, which is sufficiently large to cover the cervical stump. If the uterine arteries are not clamped before they are divided, the assistant secures them with hemostatic forceps when they begin to bleed while the operator continues his incision.

(11) *Ligation of the uterine arteries.* The isolated arteries are ligated with No. 2 cat gut and the forceps which secured them are then removed.

able. When the mass ligature is used it should be tied in the crease produced by the clamp for the following reasons:

(1) The compression of the clamp forces out all of the fatty and areolar tissue, leaving nothing but the vessels and peritoneum within its grasp.

(2) The clamp acts as an angiotribe by injuring the intima of the vessels and thereby favoring clot formation within their lumina.

(3) The ridge of tissue between the crease and the cut edge of the ligament, prevents the ligature from slipping.

While the mass ligature has given perfect satisfaction, we believe the better plan is to ligate the individual vessels, after the clamp has been removed.

(14) Covering the abraded surfaces with peritoneum. Commencing with the broad ligament stump on one side, a purse string suture of cat gut is inserted around it and the stump buried beneath the peritoneum. The same strand is used as a continuous Lembert suture to approximate the anterior vesico-uterine flap to the posterior edge of peritoneum. When the broad ligament stump on the opposite side is reached, it is buried in the same manner as the first. (Fig. III.)

(15) *Cleansing the peritoneal cavity.* Blood clots are removed by dry sponging and the laparotomy pads are counted as they are taken out.

(16) *Prevention of adhesions to the lines of suture.* The sigmoid is turned down and placed over the line of suture in order to prevent the omentum from becoming adherent in the pelvis. This is of the greatest importance in all pelvic operations as the omentum, fixed in this situation may give rise to much suffering afterward. A case recently operated on may be cited as an illustration. The patient had undergone a double oophorectomy several years ago, for some pelvic disorder. She recovered from the operation but soon afterward began to suffer constant abdominal pain and gradually developed symptoms of dilatation of the stomach. At the second operation, enormous gastrectasis was found, the greater curvature of the stomach extending down to the level of the symphysis and firmly fixed in this position by the contracted, adherent omentum.

(17) *Closure of the abdominal incision.* After drawing the omentum over the small intestine the abdomen is closed by suturing

separately the peritoneum, fascia of the rectus and skin. Heavy cat gut is used for the buried sutures and horse hair for the skin. "Figure of 8" silkworm gut sutures are then inserted through the skin and fascia, to insure against separation of the wound in case the cat gut be prematurely absorbed.

When the patient is returned to her room she is placed in a semi-sitting position and if at all depressed, is given two pints of normal saline solution per rectum, every two hours. These enemata are given slowly so that the fluid is absorbed almost as rapidly as it enters the bowel. The skin sutures are removed on the tenth or twelfth day, and the patient is allowed out of bed at the end of two and a half weeks.

While the method described above relates to large myomata, which cannot be enucleated, it is just as applicable to carcinoma of the fundus or cervix. In the malignant cases the cervix is removed with the fundus by making the primary incision through the posterior vaginal vault instead of the corpo-cervical junction.

If the fibroid extends into the broad ligament, the incision of its capsule should always be made on the posterior surface and the tumor enucleated through the posterior wall of the ligament.

The advantages of the method may be summed up as follows:

(1) The tumor and uterus can be removed about as readily and as rapidly as an ordinary ovarian cyst, the average time required for the entire operation being from 15 to 30 minutes. Most of the time is consumed in covering the abraded surfaces with peritoneum.

(2) The danger of injury to the ureters is reduced to the minimum, by rolling, instead of cutting, the uterus out of the surrounding connective tissue, thus following the natural lines of separation.

(3) There is practically no danger of secondary hemorrhage, as each vessel is ligated separately.

A SIMPLE METHOD FOR GASTRO-ENTEROSTOMY, URETERAL AND INTESTINAL ANASTAMOSIS.*

BY H. M. HEPPERLEN, M. D., BEATRICE, NEB.

At our meeting last year, I read a paper on "A Simple Method of Intestinal Anastomosis." Since then I have experimented along the same line, extending my method to gastro-enterostomies and ureteral anastomosis, which has been so satisfactory to me that I take the liberty to present this paper in further explanation of my work and research.

To further the progress of surgery, new ideas and methods are being daily conceived which are serving to bring the science more nearly a state of perfection, but to reach such a state, we shall be compelled to exchange our old ideas for the new, and thereby keep abreast of the times.

While I do not maintain my method for the above operations is perfect, and only hope before the next session of this assembly, some method may be devised that will far surpass the one I present to-day, for the present I will state, I have studied extensively and applied generally the different theories and appliances for this work, with the result that I am convinced that by my method, the work can be done in a shorter time, with less manipulation of the parts, and more securely than by any method of which I know.

During my work in the past, it was always with dread that I made an anastomosis of any of the internal organs, and before commencing the work, the method I should choose was hard to decide upon.

Having examined the different methods requiring simply a needle and thread, which we always have at hand when performing abdominal operations, and found the complications with some and time required with others, I have been lead to abandon the practice of trying to work without some support over which to stitch, and try to find a method

by which I could always have the required ligatures and material for such work at hand, and a method for doing those operations that was simple, rapid and secure.

Based upon an investigation of the numerous devices heretofore used, I conceived the idea that gelatin could be adapted to this purpose. I have it moulded in size and form required for the different operations, made aseptic, of proper thickness, and hard enough to retain its shape from fifteen to thirty minutes anywhere within the internal organs, after which it harmlessly absorbs. (Fig. 1.)

When the gelatin support is placed in position, I insert a few interrupted sutures through all the coats of the bowel, to hold the parts in coaptation. (Fig. 2.) I then complete the work by using a suture that I have never yet seen recommended.

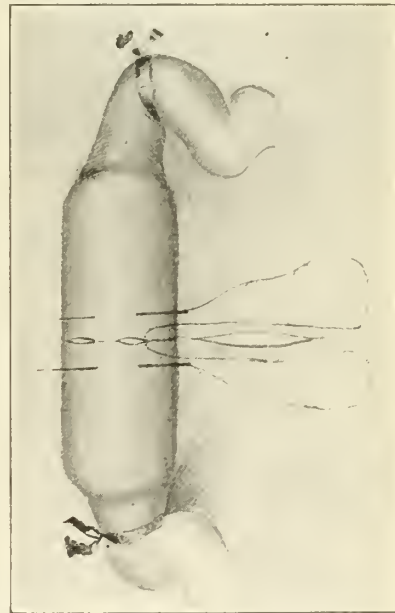


FIG. 2.—Interrupted sutures through bowel, over capsule *in situ*.

I use a fine intestinal silk twenty-four inches long, doubled, with a needle on each end, having the knot where the silk is tied, in the center. I start my first suture under the mesentary attachment, inserting a needle with each hand, at the same time through the two outside coats of the bowel an eighth of an inch from the cut margins, pick up a

*Read before the Nebraska State Medical Association Omaha, Neb. May 3 to 5, 1904.

loop about one-twelfth of an inch in length, according to the method of Lambert, draw the parts together and tie them at each stitch, continuing thus until I have completely encircled the bowel. (Fig. 3.) I

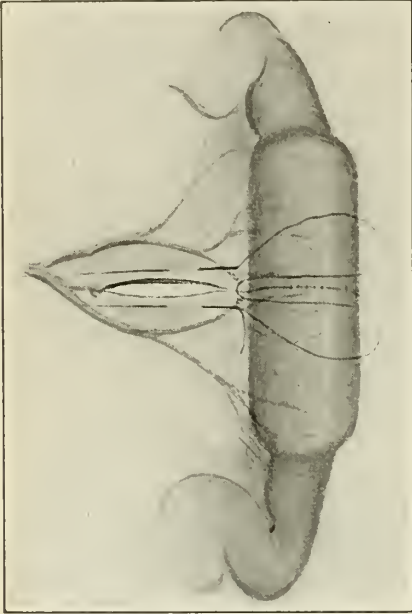


FIG. 3.—Bowel encircled with sutures and mesentery closed with same suture.

then close the mesentery opening with the same suture, being careful to pass my needles under the small vessels in the peritoneal coat, so as not to constrict the blood supply more than necessary, and when finished, I have found by forcing water into the bowel, it gave way first at a place other than where stitched. I then began to experiment on dogs, and found that I could relieve one of a part of his intestines in a very few minutes, with little harm to the dog.

My attention was next called to gastro-enterostomies. For this, I have a small flange moulded on one end of the gelatin cylinder, to hold it securely in the bowel where opened. After taking an interrupted suture on either side of the openings in the bowel and stomach, (Fig. 4), I introduce my gelatin cylinder, tie the parts together with the sutures thus introduced, thereby attaching the bowel to the stomach, then using my suture, with a needle on each end, I finish the anastomosis, by completely en-

circling the cylinder. (Fig. 5.) This secures practically the same result obtained by the Murphy button, can be done as quickly as a button can be introduced, and when complete, I believe it a much safer operation, as one need not fear the trouble that is so often caused by the button.

For my ureteral work, I have a small cylinder of gelatin, with an opening through the center, oval at each end. The cut ureter is caught with two stitches, passed through each end on opposite sides. These are used to assist in drawing the ureter over the gelatin cylinder, and when both ends of the ureter are drawn over the cylinder, they are tied to hold them in place. (Fig. 6.) I then start my two needles, as before described, except the needles for this work are smaller, and complete my anastomosis. (Fig. 7.) The object in having the small opening through the cylinder is to allow the urine to pass through, so there will be no stoppage in the canal before the gelatin absorbs.

By these methods a gastro-enterostomy, ureteral or intestinal anastomosis can be performed with very little difficulty. I keep my capsules and ligatures in a separate box, always ready for immediate use, and when needed have no extra preparation to make before I can begin my work.

In conclusion, I will state, that by using this method, if properly carried out, one can accomplish the work in a shorter time, more securely, with less shock and a lower mortality, than by any method of which I know for an anastomosis of the internal organs.

N. B.—I will state for the benefit of those who wish the appliances for these various operations, they can be procured from J. Ellwood Lee Co., Conshohocken, Pa., who can furnish the gelatin cylinders, with ligatures, all threaded ready for use, and to whom I feel greatly indebted for their kindness in assisting me with their faithful efforts to procure the exact devices for my work.

Editor's Note—The five cuts referred to in the text and not printed, were to be supplied by T. Elwood, Lee Co., but have not been received.

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FEBRUARY, 1905.

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PROPOSED TEACHING OF APPLIED SOCIAL SCIENCE IN THE UNIVERSITY OF ILLINOIS.

The passage of a state merit law by the Legislature of 1905 seems to be assured by the platforms of both great parties and by the personal pledge of the Governor. Of the full effect of such a law in stimulating the scientific spirit in the charitable and penal institutions it is too soon to prophesy. It is well to remind ourselves however that the law in itself will be but a beginning. It is as some one has said "merely a basic decency." It will signalize the public and official desire that the humanitarian work of the State shall be done in the finest way and it will furnish a method by which public

servants of scientific ability and professional ardor may be secured and retained. It will not furnish those servants. It will make the opportunity for the introduction of those improvements in the care of the sick and helpless which are already seen in the best public institutions of the world. On the other hand the law is no automatic contrivance. It will not work itself. It creates nothing but opportunity. Indeed one of the best features of the new situation is that it will invite the co-operation of other activities, but especially of the medical profession. Immediately upon the passage of a merit law, a new career of public usefulness is thrown open to hundreds of young men and women, in the work of carrying on the

various kinds of public institutions. In return for the stability of the employment it will offer, the State may well demand a higher degree of ability and training than it can obtain under the present haphazard plan. Yet if it demands this training it must also furnish it, and for such training for State service we naturally turn to the State university.

Teaching in applied social science is as yet a novel field. Harvard University and Simmons College are jointly engaged in developing a school of sociology, the University of Chicago has begun an Institute of Social Science and Arts under the leadership of Graham Taylor, the New York Charity Organization Society has just received a quarter of a million dollars for its School of Philanthropy. All these are for the general training of students of humanitarian and social problems, many of whom are likely to seek employment in private or public philanthropic enterprises. In like manner why may we not demand at this auspicious time—when the whole State is aroused to the need of genuine scientific care for the public wards—that the State University shall undertake the training of students who shall fit themselves for service in public institutions especially, although by no means limiting students in such a department to this class. It is not necessary to work out in advance just what form such work should assume. The problem must be solved slowly and tentatively in close cooperation with the authorities of the various public institutions.

It has taken years to work out the system of trained nurses, so that today nursing is a dignified profession. The trained nurse is not a rival or insubordinate inferior to the physician as was once feared, but a self-sustained worker in a field marked out and supervised by the physician, a force which

makes possible medical successes otherwise absolutely unattainable. If this be true in the case of those acutely ill with obvious bodily ailments, can it not be equally true in our hospitals for the insane and even in our penal institutions? The proportion of *recognized* insanity among prisoners is ten times that found in the average population. Every penologist, every intelligent prisoner deprecates or resents the typical prison guard who is selected for his weight and muscular strength, perhaps, but surely because of his political "pull." The whole prison question is one which needs sustained medical attention. It can not be solved by contractors and politicians, however honest.

The entire body of authoritative alienists today agree that it is the care of the patient in the wards which counts most. Even with the best and largest medical staff the doctor can see the patient but a few minutes daily. He can give directions but he can not carry them out. The attendance on the wards needs complete reorganization. No service would be too expensive which proportionately increased the number of recoveries. Dr. Peterson says each chronic case costs the state of New York \$6,000. In Illinois the increment of chronic cases yearly added to the public burden is doubtless at least 300, entailing an ultimate cost of \$1,800,000 upon the public, according to Dr. Peterson's basis of calculation.

The lay public is beginning to understand all this and will gladly justify a more costly service if it can see a more intelligent service and a final result of more recoveries.

There is an irresistible pressure upon the state to assume the care of classes not yet recognized as state charges. The claims of the epileptics, of the tuberculous, of all insane are properly urged. The responsibility of the state for all children, whether de-

fective or dependent or delinquent, is being recognized. Any adequate care or supervision of all these classes and perhaps of others not yet considered, requires special knowledge. It must be done in the spirit of modern medical science. This spirit must demand trained intelligent service and hence the medical profession is interested not alone in a reorganization of the medical service of public institutions on modern lines, but in lifting up the employes of all classes to a higher level.

The time is ripe in Illinois to begin work in this direction, and where should it begin so naturally as in the University of Illinois—the center of public education in this State? While the German state universities do not afford any precisely similar instance, yet the close relation established between them and the public dispensaries, general hospitals and hospitals for the insane, and the strict training afforded medical students thereby, is closely analogous and is full of suggestions for the present purpose.

Friends of education and friends of the helpless inmates, whether those inmates be patients or prisoners, may well agree in earnestly hoping that the present legislature will appropriate a sum which will permit the University of Illinois to inaugurate practical applied teaching such as shall result in an efficient, trained service for the State institutions.

SMALLPOX DISAPPEARING IN MANILA.

According to the last reports on vital statistics of Manila, Phillipine Islands, plague cholera and smallpox are at last yielding to the intelligent efforts of the American officials. When the character of the inhabitants and the construction of the dwellings is taken into consideration this achievement is only a little less remarkable than the

eradication of yellow fever from Cuba. The report is also noteworthy in that it upsets the old idea that smallpox is more prevalent in cold weather. The official report reads: . Fifty-four per cent of all deaths occurred in children under 1 year of age, the greatest mortality being caused, as in the preceding months, by infantile convulsions, the number of deaths from this cause being 367.

Quarantinable diseases.—Of quarantinable diseases, only 1 death was registered from bubonic plague, the victim being a native resident of the district of Tondo. There were 5 cases of smallpox, with 2 deaths.

Twenty-four thousand three hundred and ninety-one vaccinations and revaccinations were performed in the city.

One hundred and twenty-four thousand units of vaccine virus were shipped to the provinces.

The prophylactic measures which are being diligently carried on in the city, together with the close of the warm season, during which, according to observation, smallpox spreads more rapidly, justify the statement that this dreadful disease will soon disappear.

Those wishing to secure space for exhibit at the Rock Island meeting should apply at once to Dr. E. M. Sala, Rock Island, Ill., for blue prints.

PRELIMINARY REPORT OF MEDICO LEGAL COMMITTEE.

At a meeting of the Medico Legal Committee held in Springfield, January, 1905, it was decided to make certain recommendations to the next meeting of the State Society and as those recommendations involve raising the dues, the creation of a large committee and instructions to the delegation to the American Medical Association, it was decided that this proposed report should be brought to the attention of each county society.

This committee was appointed at the last

meeting of the State Society, but under the present constitution and by-laws it can not do the work that the society vaguely had in mind when the committee was created. They will propose the following changes in the constitution and by-laws to amend article ten of the constitution.

"To amend Article Ten of the constitution so that the line will read \$2.50 per capita instead of \$2.00 as at present."

"To amend Chapter Fourteen, Section One, by adding after the words 'Shall be as follows' the following, 'A Medical Legal Committee.'"

Also to amend Chapter Nine by adding Section Six to read as follows:

"Section Six—The Medical Legal Committee shall consist of three members from Cook county and one member from each county other than Cook in the state. Its members shall be chosen by the House of Delegates upon the recommendations of the County Medical Society, the term of service shall be three years; from this committee an Executive Committee of five shall be chosen. It shall be the duty of this Medico Legal Committee to carefully investigate suits or threatened suits against members of the State Society and in case the charges are ill founded or the damage asked is excessive, to lend the threatened member such council and aid as is within its power. One Dollar of each due paid shall be placed in a Medico Legal fund, which fund shall be managed by this committee subject to the approval of the House of Delegates.

The following plan seems to this committee feasible and advisable. The large committee will be a rather loose organization; each committeeman will virtually be the committee in his county. The concrete organization will be the executive committee—this sub committee will have charge of the funds, will collect a library, will employ all moneys and determine legal policy, counselling lawyers will be retained, arrangements will be made with trial lawyers in the different counties. In case a member is threatened with a suit he will report to his county member, that member will investi-

gate, handle the case if he can, if not, place the facts gathered before the executive committee.

The committee furthermore will recommend that the delegates from Illinois to the American Medical Association be instructed to advocate that the American Medical Association establish a Medico Legal department along the same lines, the states being the units instead of the counties, as in the plan proposed by Illinois.

(Signed) W. A. Evans,
H. N. Moyer,
G. N. Kreider,
E. J. Brown.

H. C. Mitchell was not in attendance.

THE BEST MAN FOR THE PLACE.

A journal styled The Chicago Clinic and Pure Water Journal, whose publication office has recently been moved from Chicago to Springfield, "where better mechanical facilities are procurable, and where more economical management is possible," and where we are told needed financial aid is obtainable, has some strictures on the management of the Illinois Medical Journal. In a general way it is asserted that a small number of physicians are endeavoring to use the State Journal for personal ends and to the detriment of a particular office holder, who for the past eight years has administered the leading medical office of the State with such satisfaction to himself that if he were displaced he feels that it would be a professional calamity. That this is a fair statement of the frothy January issue there is little doubt, as we are very confident that if this journal supported the aspirations of this particular office holder, Pure Water would echo our praises and we would represent, not a "coterie," but the organized profession. We shall not answer the innuendoes and personalities reflected in Pure Water. For example, we are charged with having lost the confidence of the medical profession of Cook County, though what earthly bearing this can have upon the question of office holding we fail to see. Such idle charges are only ejected like the inky fluid of the squid to ob-

secure the important issue. It is believed that the State of Illinois is now entering upon a constructive period in legislation and administration, and that the present executive will try to put the State charitable institutions upon a sound civil service. Much sanitary work also needs to be done, and it is most important that the chief medical adviser of the administration should be a man able, reputable, fearless and honest. This journal has and will continue to urge the appointment of such a man. It cares not where he comes from or who his friends are. The good of the profession and the people of the State will alone be considered.

In taking such a stand, it is possible that the Pure Water Journal sees one of those "mild but significant utterances" which are interpreted as meaning opposition to a particular office holder. *Veritas odium parit.*

THE STATE BOARD OF HEALTH.

The annual meeting of the State Board of Health was held on the last day of January, when the officers were reelected. This must not be understood as meaning that the gentlemen composing the Board have been reappointed. Notwithstanding the strenuous efforts being made to make it appear that reappointments have been made, we are reliably informed that the Board for the present simply remains *in statu quo*.

Correspondence.

THE ILLINOIS TUBERCULOSIS TENT COLONY.

Galesburg, Illinois, Jan. 5, 1905.

To the Editor of the Journal:

The efficacy of the Illinois climate in the treatment of pulmonary tuberculosis, is now receiving most satisfactory demonstrations at Ottawa, LaSalle County. It is confidently believed by those who have been watching the course of events there, that, as far as the climatic effects are concerned, sufferers from tuberculosis will improve even more rapidly here than in the most favored climate in the west. A no small part of the favorable re-

sults obtained is undoubtedly due to two additional factors which are rarely found by those seeking relief from tuberculosis where climate is the principle thing sought. I refer to an abundance of food, deliciously prepared, and the comforts of the home, both of which obtain in large measure at the Ottawa Tent Colony.

I am sure that physicians who have had any considerable number of these cases to advise as to the climate most favorable for the sufferer to live in, have in many cases been disappointed in the results of climatic treatment alone. The reason for this is as above—the lack of proper food and a good place to rest. In other words, climate is but one factor in the successful management of pulmonary tuberculosis. The misery, one may say the cruelty, that the medical profession has been directly responsible for in sending these patients away from home comforts to merely exist in boarding houses, is a chapter that can never be completely told. How many patients have been thus banished only to return in a few weeks in a much worse condition than when they started?

I am not referring to the hopeless cases; but to those still amenable to the methods we now know to be necessary in order to get the best results. The difficulty in these cases was that referred to above: they found climate, but they needed something infinitely more; and that was an abundance of the very best food and a place to rest where strength was to be the chief end in view.

Last winter while in Denver, I saw many sights which go to show the truth of the above statements. One of them was a man, evidently a "one lung'er," who was sitting on the slanting, narrow roof of his boarding house, surrounded by the redolent odors of fried cakes and potatoes swimming in ham gravy. He was getting climate, to be sure, but with it were such surroundings as to bring about a disgust for food, and finally a drifting into a mental and physical state which is but the beginning of a toboggan slide toward the grave.

There is, in this connection, another ques-

tion not often referred to, but which we may well begin to ask, namely: How long the states, in which these cases usually congregate, are going to stand for the great burden of caring for the tubercular poor who come in from other states? This phase of the matter has been discussed by the legislative bodies of several western states, because the expense of caring for this class is already entailing burdens that are being felt.

So I repeat, Mr. Editor, that the demonstration being made by Dr. Pettit with his Tent Colony, situated advantageously as it is, on the bluffs overlooking the Illinois River, is of incalculable value; first, in showing that cures can be made in the climate of Illinois, and second, that the climate is but a part of the requirements for the successful management of these cases. Home comforts and an abundance of scientifically prepared food, are equally important. It seems certain that these three (food, climate and the comforts of a well regulated home) will in the future prove to be the tripod on which the successful treatment of tuberculosis is to be built. The Illinois State Medical Society is fortunate; first, in initiating by resolution at Bloomington, May, 1904, this important work, and second, in having given the carrying out of the provisions of this resolution to Pettit of Ottawa.

It is also gratifying to know that this work, commenced by our State Medical Society, has been so ably seconded by the present State Board of Health.

My letter is already so long that I may not ask for further space in this issue; but if it is possible, will you insert the inclosed copy of a letter recently sent out by Dr. Mix and myself, as members of the Committee on Tuberculosis of the Illinois State Medical Society.

Very truly yours,

J. F. Percy.

THE TENT COLONY.

Galesburg, Ill., December 15, 1904.

Dear doctor:

We are taking the liberty of addressing you personally in order to obtain your interest and co-operation in maintaining the Ottawa Tent Colony at its present high state of efficiency.

This venture was inaugurated to demonstrate that the climate of Illinois is one in which the open air treatment of pulmonary tuberculosis can be carried on as successfully as anywhere in the country. That this has been shown in the most marked way is the testimony of all who have investigated this institution. Indeed, few similar colonies can show the results obtained at Ottawa because few have had, or are having, the intelligent supervision of patients which obtains there. But winter is coming on and especially the holidays, during which patients want to be at home and among their friends. This threatens to seriously embarrass the financial end of this institution, which is not being run for profit and which to date has not quite paid expenses.

There are thousands of suitable cases in this state to whom this institution would come as a God-send, if they could but know of its successful work. This, then, is the real purpose of this letter: to urge that you send at once every case that has not passed the first or second stages of this disease, to Ottawa. First, for the good of the patient; and, second, as a continued example for good in demonstrating that Illinois has a tent colony where patients have a greater prospect for a cure than anywhere else on earth.

Sincerely,

Charles Louis Mix,

J. F. Percy,

Members of the Committee on Tuberculosis, Illinois State Medical Society.

DELINQUENT LISTS.

Galesburg, Ill., Jan. 16, 1905.

Dear Editor:—Knox County Medical Society is considering the adoption of some form of a delinquent list which will be practical and at the same time not involve the society nor the individual member in the meshes of the law.

We have ascertained that many of the ordinary methods are faulty from this point of view. For instance a man is reported as delinquent who can prove that he pays some of his accounts. In some states he can now proceed by law and collect damages not only against the one who made the report but against any member who is a party to the plan.

I will be pleased to hear from anyone who has had any experience with delinquent lists. How simple, how effective, how valuable have they been and what have been their disadvantages? Have they any legal flaws?

Very fraternally yours,

G. S. Bower,

Sec'y. Knox County Medical Society.

Directory of Chicago Societies.

District No. 1—North Side.

Boundaries: The river, the North Branch, the lake, Belmont Ave.

President, D. Lieberthal, 1750 Wrightwood avenue.

Secretary, R. H. Herbst, 517 Dearborn avenue.

Meets on the second Thursday of each month at 8:30 P. M., at Chicago Academy of Science building, Lincoln Park.

District No. 2—North Shore.

Boundaries: Belmont Ave., the river, the lake, the city limits.

President, G. W. Green, 2765 North Lincoln avenue.

Secretary, Geo. E. Baxter, 1916 Evanston avenue.

Meets on first Tuesday of each month at 8:30 P. M., at Ravenswood Club House.

District No. 3—Evanston.

Boundaries: City limits, Northwestern tracks, the lake, the county line.

President, P. D. Harding, Evanston, Ill.

Secretary, Dr. S. V. Balderston, Evanston, Ill.

Meets on third Thursday of each month at 8:30 P. M., at Woman's Club rooms, Y. M. C. A. building, Evanston, Ill.

District No. 4—Northwest.

Boundaries: Kinzie street, the river, the Northwestern railroad, West Fortieth street.

President, M. H. Luken, 79 Ewing place.

Secretary, E. E. Henderson, 171 Humboldt boulevard.

Meets on first Friday of each month at 9 P. M., at Northwestern University Settlement building, corner Noble and Augusta streets.

District No. 5—West Side.

Boundaries: The river, Kinzie street, Twelfth street, West Fortieth street.

President, J. A. Robinson, 297 Ashland boulevard.

Secretary, J. J. Alderson, 576 West Adams street.

Meets on third Thursday at 8:30 P. M., in Cook County Hospital, Wood and Harrison streets.

District No. 6—Aux Plaines.

Territory: The city west of West Fortieth street, and suburban towns on the C. & N. W. in Cook and DuPage counties.

President, A. J. Rosenberry, Oak Park, Ill.

Secretary, G. P. Head, Austin, Ill.

Meets fourth Tuesday; place announced each month.

District No. 7—Douglas Park.

Boundaries: The river, Twelfth street, the drainage canal, the county line. Includes suburban towns on the C. B. & Q., R. R.

President

Secretary, C. D. Pence, 859 Turner avenue.

Meets first Monday of each month at Gads Hill Settlement, Robey and Twenty-second streets.

District No. 8—Stockyards.

Boundaries: The river and drainage canal, State street, Western avenue, Fifty-fifth street.

President, T. C. Gary, 2184 Archer avenue.

Secretary, R. J. Tivnen, 100 State street.

Meets on second Thursday of each month; meeting place to be announced.

District No. 9—Southwestern.

Boundaries: State street, Fifty-fifth street, C. R. I. & P. tracks, county line. Includes suburban towns on C. R. I. & P. R. R.

President, F. L. Rose, 5420 South Halsted street.

Secretary, C. H. Lovewell, Fifty-fifth and Halsted streets.

Meets on first Tuesday of each month at 9 P. M., at Grace Cafe, 540 West Sixty-third street.

District No. 10—South Side.

Boundaries: The river, State street, the lake, Sixty-seventh street.

President, J. L. Miller, 159 East Forty-seventh street.

Secretary, W. S. Harpole, 4827 Madison avenue.

Meets on—Thursday of each month at Vendome Hotel, Sixty-third street and Monroe avenue, at 9 P. M.

District No. 11—South Chicago.

Boundaries: Sixty-seventh street, C. R. I. & P. tracks, the Lake county line.

President, A. W. McLaughlin, 9139 Commercial avenue.

Secretary, J. S. Davis, 9139 Commercial avenue.

Meets in Dr. Harvey's office, Ninety-second street and Commercial avenue.

The meeting of December 14th of the Chicago Medical Society was taken up with a symposium on pneumonia, and papers were read as follows:

1. "The Proposed Work of the New York Pneumonia Commission," by Dr. Frank Billings.

2. "Etiology and Epidemiology," by Dr. Edward F. Wells.

3. "Modes of Onset, Typical and Atypical," by Dr. C. S. Williamson. (See page 145, this issue of the Journal.)

4. "Physical Basis of the Diagnosis," by Dr. R. H. Babcock. (See page 149, this issue of the Journal.)

5. "Cardiac and Renal Changes," by Dr. A.

R. Elliott. (See page 141, this issue of the Journal.)

At the meeting of December 21st, the symposium on pneumonia was continued, and papers were read as follows:

1. "Blood Findings in Pneumonia," by Dr. E. C. Rosenow.

2. "Pneumococcus Infections Other Than Pneumonia," by Dr. R. B. Preble.

3. "Pneumonia Due to Other Organisms Than the Pneumococcus," by Dr. James B. Herrick.

4. "Diagnosis of Pneumonia in Childhood," by Dr. F. S. Churchill.

5. "Treatment of Pneumonia," by Dr. Frank S. Johnson.

The general discussion on this symposium

was postponed until the meeting of December 28th.

Dr. Edward C. Rosenow read a paper on the **Blood Findings in Pneumonia**, of which the following is an abstract:

Bacteriology of the Blood.

In 175 cases examined, the *Pneumococcus* was isolated in 91%. Positive results were obtained as early as twelve hours after the initial chill and as long as 48 hours after the crisis. Cultures after the crisis, however, usually proved negative. A negative result indicates nothing except probably that something is wrong in the technic. In no instance could I demonstrate pneumococci in leucocytes. In the Atypical pneumonias and vague infections where the diagnosis is otherwise difficult or impossible, blood cultures are of the greatest value. By the aid of Blood cultures we are finding that the pneumococcus is found in the blood before any physical findings are present. Cases have been observed by Preble and others in which no physical signs of consolidation of the lungs were demonstrable yet running a typical course of pneumonia. The view that pneumonia means the secondary localization of a primary blood invasion and not a local disease, seems to be gaining ground.

Cellular Changes.

Bockman has determined that in pneumonia, as in other acute infections, the number of Erythrocytes are inversely proportionate to the degree of temperature. There is scarcely any infection in which the production of anaemia is as rapid as in pneumonia. Other things being equal, a high leucocytosis is a favorable sign. Cases with excessively high leucocytosis are apparently more prone to development of empyema and other complications.

The Agglutinating and Acid Producing Phenomena by the Growth of Pneumococci in Pneumonic Serum.

Does the pneumococcus, by its growth in the consolidated lung and in the blood of the patient intra-vitam produce acids as it does in the test tube, and if so, may not some of the symptoms of pneumonia be due to an acid intoxication?

In support of this view we now have the following evidence:

1. It has been shown in this investigation for the first time that the pneumococcus when grown in pneumonic serum produces a marked acid reaction.

2. A careful study of the literature seems to justify the statement that late in pneumonia after the powers of resistance fail, and after death, investigators have uniformly found a diminished alkalinity of the blood.

3. Smith and others "find a uniformly acid reaction of the lung tissue in cases dying from pneumonia."

4. Through the kindness of Dr. Billings I am able to report the following important observation. In the treatment of seven cases of pneumonia by the administration of large doses of alkalis, it was noted that the urine

became strongly alkaline in reaction, and remained so until the time of crisis, a result of this medication. However, at this time when the products of resolution are being rapidly absorbed, the urine becomes acid in reaction for a period of time varying from 24 hours to 48 hours in four cases. In three cases, the urine subsequently became alkaline. These facts verify as nearly as possible in the human body a test tube experiment. To deny that pneumonia is partly an acid intoxication in the light of these findings seems to me to be hypercritical. Granting that pneumonia in part at least is an acid intoxication, would not the administration of alkalis in large doses be indicated in the treatment of this intensely fatal disease? In fact it would seem that this is a rational explanation of the good results claimed by some investigators from the continuous administration of some alkali water, etc., in the treatment of pneumonia.

PHYSICIANS' CLUB OF CHICAGO.

The regular meeting of the club was held at the Sherman House, Tuesday evening, December 6, 1904. Chairman of meeting, Dr. E. J. Doering.

Subject: The Place in Medical Education of the Evening Medical School.

Speakers: Dr. L. Blake Baldwin, President Dearborn Medical College; Dr. Frank Billings, Dean Rush Medical College; Dr. H. M. Martin, President Jenner Medical College; Dr. Weller Van Hook, Professor of Surgery, Northwestern University Medical School; Dr. Frances Dickinson, Dean Harvey Medical College; Dr. D. A. K. Steele, Professor of Surgery, University of Illinois; Dr. George W. Webster, President Illinois State Board of Health.

Dr. E. J. Doering, Chairman, called the meeting to order and said:

I am surprised to have been asked to preside at this meeting but understand that they have been looking all week for a man who was not connected with schools to preside and not being able to do so asked me.

The question is "whether men or women should study by day or by night."

I have known of men and women seeking an education who were willing to do anything to be educated and do know of people who have worked all day and have gone to school at night willing to do everything with that end in view, and persisted in all they did with that in view.

I will now call Dr. L. Blake Baldwin; President of the Dearborn Medical College.

Dr. Baldwin: I deeply appreciate the honor conferred upon me this evening in being invited to address this honorable body of the representative medical men of Chicago on a subject in which I am deeply interested, **the place of the night school in Medical education** and to say a word in behalf of the men of high ambitions and aspirations who have created a demand for such an institution.

If only those who have the advantage of a

competency, might aspire to a higher professional or scientific education, it is self evident that there would be little use for the evening classes established by our public and high schools, for the evening extension courses, attended by our public and high school teachers, for the evening departments of our commercial and scientific schools. For that branch of one of our greatest universities recently established in the heart of our own city, for our evening law or medical colleges, founded for the express purpose of aiding in the elevation and enlightenment of those who, for financial reasons, are debarred from devoting their entire time to educational advancement, and who does not honor the man or woman who will override every obstacle to fit himself or herself for his chosen vocation.

These are the self made men with high ambitions and a purpose in life, who have distinguished themselves in national and financial affairs, standing shoulder to shoulder and many times outclassing their more fortunate neighbors in their battle through life. For the man who will undertake a professional education while at the same time supporting himself and oftentimes his parents or own family, has a grim determination and a purpose in view that knows no failure. These are the men who make up our evening classes in medicine. Men who sacrifice every social pleasure; every hour, to their duties and count the value of every minute, who are never without their books on the car, at their lunch, in the college study room and late into the night in the solitude of their own rooms. Gentlemen this is the manner of their lives and those of you who have seen, have been impressed with the absorbing attention paid to their teachers, tolerating no interruption, making note of every point.

That such men will succeed is beyond question, for it must be conceded that with a course of study of a recognized required length and an efficient teaching faculty, the mental capacity and personal effort of the student is the only remaining factor in determining the thoroughness of his education. That the evening medical colleges do provide the required term of instruction, it is only necessary to consult the time requirements of the Illinois State Board of Health to which they are responsible, not only for the term of instruction, but for preliminary educational qualifications, as well, and further to the recent "report on the curricula of American medical colleges" compiled by Dr. Geo. W. Webster and the recommendations thereon for a standard curriculum which is, to my own personal knowledge for the entire four years, less than 100 hours in excess of the time now being given by at least one of the evening medical colleges of Chicago. With this fact before us it is further argued that no time is left for study. But every student utilizing every minute of his time during the day and studying late at night, finds from four to eight hours to pore over his books, which you will all agree is as much time as that afforded to the day student, after being in school all day, even if he is not one of those,

who utilizes his time out of class in seeing the odd sights of Chicago.

It has been argued again that a man cannot do two things at once, that he must slight either the one or the other, that he must either slight his employer or neglect his studies. If this were true, it would be hard to account for the responsible positions held by the night students in the many financial and commercial enterprises with which they are connected, where merit alone is the test of their positions: and who stops to question the ability of the man in the commercial world, who is a responsible and executive head of not only one but various enterprises. Were these men to neglect their employers in their positions of responsibility, which many of them hold, that of bank tellers, accountants, auditors, heads of departments, etc., or even down to the most humble, menial position, their removal would be a question of short notice. Yet in canvassing the situation, I have not known of one single instance, in which a student of a night school has been removed from his commercial position from dereliction of duty to his employer.

It is not every man who undertakes the study of medicine at night who completes his education. The life during his period of education is strenuous to the highest degree; but those who do succeed in standing the test, have brought honor in their examinations before the State Board of Health and have stood fairly with the graduates of our day schools, and those who have chosen to take their last year's work in a day school, have practically without exception, graduated with credit and often with honor to themselves and the institution that issues their diploma.

In summing up the situation as revealed by the report of our Honorable President of the State Board of Health, referred to, there is lamentable lack of uniformity as to what is considered the proper term of a medical course. And it has been demonstrated that it is not only possible but practical, for a night school to devote the average number of hours to clinical and didactic class work, and this is now being done and whenever it is possible to adopt a uniform curricula, I can give you my absolute assurance that, at least one of the night schools of Chicago will be among the first to adopt this standard, even though it require a five or six year course to meet it.

Dr. Frank Billings, Dean of Rush Medical College was introduced and said that the place of the night school in medical education is a subject which must interest every physician. The discussion of it involves a discussion of the subject of medical education. It should be considered without prejudice and our expressions should be without rancor.

The status of medical science of today is very different from that of twenty or of fifteen—and yes, of even ten years ago. Twenty years ago medicine was taught chiefly by lectures and by clinics and but a moderate amount of work was done in the laboratory. Today laboratory instruction is the chief means of teaching the first two years of medicine and

it also enters largely into the instruction of the last two years. The fundamentals of medicine comprising physiology, chemistry, anatomy, pathology, including bacteriology, require a preliminary knowledge of physics and of general biology and the individual who would apply his knowledge of the fundamentals in the practice of medicine and surgery in a rational way must be thoroughly grounded in these fundamentals. If these fundamentals are properly taught, it requires a large and costly equipment with many teachers and as a result the cost of instruction is now very great and amounts to—from the estimates made by good teachers in many schools—from \$450 to \$500 a year per pupil. The proper instruction in the clinical branches requires a control of clinical material which involves an expense that means a cost of not much less for the clinical years than that of the first two.

If a student is properly taught so that as a practitioner of medicine he may not only be a rational practitioner and not merely a peddler of pills, but a constructive investigator, his education will cost much more than he will pay in tuition. Consequently there is no profit financially to the medical school in educating students of medicine.

This country is already over-crowded with colleges and far more students are turned out each year than can find places in which they can practice medicine with the prospect of gaining even a living.

The question therefore of the place of the night school in medical education involves first the question: Is it needed?

I think one may answer that it is not and when one answers that it may be also said that there is no place for many of the day schools which now exist.

Can the night school properly educate its students?

The answer to this involves first the answer to the question as to whether an individual can follow an occupation during the day by which he may gain a living and pursue in the evening a course of study which will be of profit to him.

I think one may say that the study of medicine is so important and is so profound that to master it in the time usually devoted to it will require the undivided attention and full strength of the student. When tired after a full day's work, the student is not likely to be in a condition to give his best attention to the work before him.

That poverty or the necessity for earning a livelihood is an excuse for an individual to study medicine at night is, it seems to me, not well taken for if an individual have the right stuff in him he will be able to secure enough money by some means which will enable him to devote his whole time in a day school with opportunities of study at night even though it may take a larger period of time to gain that end than by attempting to do two things at one time, one of which at least must be superficially done.

In the past many of us had to earn our way

in college and the difficulty of securing money to enable one to give one's whole time to medicine was not very different twenty years ago than at the present time.

One often hears the remark that the men of today who have become eminent received an education twenty or more years ago which was very superficial in the fundamentals as compared with the necessary knowledge of those branches today. This is unquestionably true but as a rule those men have had to get their fundamentals chiefly by post-graduate work which required usually a visit to foreign countries and an expenditure of a great deal of money and of time which meant still more money. Even now such men are limited in the sense that they add to the sum of clinical knowledge rather than to be constructive workers. I do not believe therefore there is a good reason for the existence of the night school. I cannot understand how they can secure the equipment or the clinical material with which to meet the demand of today nor can I understand how they can expect to teach students whose time is chiefly given up to some other occupation well enough to make good practitioners of them. I believe that the men and women who are engaged as teachers in the night schools are as a body honest and conscientious in their work and that they feel they are doing a good work. But nevertheless I am opposed to the night school.

The chairman introduced Dr. H. M. Martin, president of Jenner Medical College.

Mr. Chairman, Ladies and Gentlemen of the Physicians' Club: I have but a few words to say. I am not here to defend the evening medical schools, that is not necessary. Its place in medical education is the same as the day school. Any man or woman of sound mind and good judgment with the requisite literary education has a constitutional right to study medicine when and where they please, it matters not whether it be in the sunlight or the sunlight or the sunset college. The requisites to obtain this education in either are the same, a qualified faculty to teach and qualified application of students, backed with ample equipments and the necessary materials. I shall not tire you with an explanation of what is necessary to have and to do in order to teach medicine. I know the majority of those present and am fully aware that they know of all the requirements as set forth by Dr. Billings, who endeavors to show that a school must be endowed in order to give the proper and efficient course. Not at all; if our teachers are endowed with human feeling toward the earnest, but poor student and desire to give their services for less than those who teach in day schools, that is entirely their business. Again if a man or woman desires to study medicine at night and work, perhaps much harder than the day student, that too is their business.

I know of a young man, who by his day efforts supported a widowed mother and crippled sister and worked himself through high school by night work, his father having recently died and now he faces the necessity of day work

for his ambition is to go to the night school of medicine. Such men have the right "go" within themselves to make the very best of anything they undertake. This is only one instance. Nine-tenths of the students who study nights do so under similar conditions. Shall such men be denied their ambition, most assuredly not.

It has been said here tonight that they can only hope to attain to so-called "business men doctors." I contend that this is the first thing that all of our so-called "big doctors" have done in establishing themselves. No doctor succeeds as he should without he associates with his medical education the greatest possible business judgment and tact with diplomacy. You all know of many thoroughly qualified physicians in any cases much better than they who are so called "successful" (in medicine) yet they cannot earn enough to keep "body and soul together." They may even have to solicit the "big doctors" to send them "nursing cases." And all this too for the lack of business tact, judgment and some diplomacy. And finally are our own lawyers being educated by inferior means simply because three-fourths of the Chicago law schools are night ones.

It cannot hardly be possible that the so-called day school; might be likened to my dear, Sunday preacher, in righteous indignation, in speaking of other creeds said "Oh, Lord forgive them for they know not what they do." Of course his was a special religion.

No medical education is as thorough as it should be until the student has fully demonstrated his knowledge in a satisfactory manner at the bedside and in the operating room and yet nine-tenths of medical students are graduated as proficient in medicine and surgery without any such training. This is not ideal medical education.

Dr. Weller Van Hook, of the Northwestern University Medical Faculty, said that the idea of Medical Education in Chicago is one that needs careful study. The ideas are higher than ever before, as Dr. Billings has shown. Laboratories and expensive facilities are required to teach as we do now. More time is required of the student than ever before.

The facts of medical science have multiplied to a wonderful degree. No individual can carry in mind all the facts. He must have gradually absorbed the principals and know where to look for his facts. Facts must be first taught and principals must be carried away. Facts can be learned quickly but principals must be slowly allowed to sink in and become part of the individual.

A medical friend of mine told me with great glee how his little boy of five could name all the bones of the human body.

The cultural side of medical education must not be lost sight of. Medical culture cannot be obtained in a day. Stuffing of facts may be a rapid process. They must be classified and put in order. Too little thought is given to culture in medical education. We are all inspired by the views of Osler.

We must consider the influence of the medical man on the progress of science. Literary medical culture is more than medical science.

The results of the night schools will be determined by time. It is yet too early to judge.

Dr. D. A. K. Steele, Professor of Surgery, University of Illinois, said that it was now his turn to roast the night medical schools, but he knew what the night medical schools are doing. He formerly labored under the delusion that they were kindergardens. He found, however, that youth was the instructor and the adults were the pupils. The kindergarden was reversed.

He thought the equipment would not compare with that of the day medical schools. He was surprised to find that it excelled in the school he visited that of his own school. He came away and set to hustling for a better equipment.

The night schools have an important place. Its plan compares with that of the university extension courses. Those who wish to study medicine should have the same right to study evenings or any time as those who wish to study other branches of science.

He formerly opposed the night schools but has been converted. He knew of some others who have been converted, among them Prof. Quine. There are two sides to the question. He is in favor of them and believes that they fill a place in medical education.

Dr. Geo. W. Webster, President of the Illinois State Board of Health said that the place of the night schools in medical education seems to be not of theory but of fact. Therefore let us consider some of the facts which ought to throw some light on this subject.

There are 202 law schools in the United States 25 are evening schools. In the Y. M. C. A. throughout the country 32021 persons are taking the evening supplemental education to broaden their knowledge. In the city of Chicago alone about 1600 are taking supplemental evening instructions.

Average earnings of medical students are \$10.00 to \$15.00 per year. There are 157 medical colleges in the United States. He had no figures covering all of these but a student's committee has existed in Columbia for 10 years which seeks employment for those students who desire to earn money. This committee obtained employment for a large number of men during the year. The total earnings were considerable.

A certain time during the day or night must have necessarily been devoted to the work necessary to earn this money. The students who earned this could not have devoted their whole time to the study of medicine.

About ten years ago when the State Board of Health was called upon to give its recognition for the first night school in Illinois, it established an arbitrary standard of requirements

which the night schools were able to cover. At that time four years of study were required of six months each, running through 4 calendar years—nothing was said as to whether this should mean 1 hour per day or 1 hour per month. Since then it has established the rule that there must be five hours a day as the minimum amount of time to be devoted to class room work. By this standard the night school, giving instructions three hours an evening, should have a course lasting 6 years. One giving 4 hours an evening 5 years. If they cannot come to the standard they must go out of existence. If they do come up to the standard there is a place for them, it surely can make no difference whether a medical student earns his living during the day and gets his medical education at night or vice versa.

The subject was then thrown open for general discussion.

Dr. J. A. Egan: I came here tonight to listen rather than to talk. I desired to hear the views of not only the physicians on the program, but of others who might be present. My opinions, furthermore, might not interest you greatly. They would undoubtedly be considered somewhat *ex parte*, in view of the fact that the State Board of Health during the past year has recognized an evening school. As the chairman has called upon me to speak, however, I will take the liberty to wander a little, and briefly discuss a subject which is probably of as great interest as that under discussion, namely, the place in medicine of the day school, or rather, of some day schools. When this subject occurred to me I had in mind certain documents on file in the office of the State Board of Health which throw considerable light on the manner in which certain schools have been conducted of late. I will not go deeply into this subject tonight, but will simply call to memory for your edification one of the examination papers, which was presented to the State Board of Health not very long ago. The candidate is a graduate of a leading college of a regular school located not a thousand miles from Mason & Dixon's line. He graduated, not in 1884 when the repetitional course was in vogue, when "the preliminaries" were somewhat neglected, when little or no evidence of preliminary education on the part of the applicant was actually required by many institutions, but in 1904 when the majority of medical institutions, including that under discussion, demanded that each matriculate should present evidence of attendance on a high school course or its equivalent: when the standard of medical education was being steadily advanced, when the majority of medical colleges required an attendance on four full courses of graded lectures. This candidate appeared before the State Board of Health for examination. He failed to pass the examination for reasons which will later become apparent to you. I will call to memory some of the answers made by this candidate to simple questions propounded by the Board.

He was asked to give the dose, method of administration, and the therapeutic indications of morphine sulphate. He advised the Board that "morphine is a Hypnotic, dose usually $1\frac{1}{4}$ " and that "it might be given internally or hypodermically."

A similar request in relation to tincture digitalis brought out the following information: "Tr. digitalis is a hart tonic dose about 40-60 m. it is indicated in weak hart or in mummurs in acute parinchinitis nephritis."

Phosphorous, according to this aspirant for medical honors in Illinois, "is a tonic. dose gr. 30-50."

Strychnine was considered "a hart tonic, dose 30-60," but whether ounces or grains the Board was not advised. Strychnine is indicated in "a weak hart as failure during an anesthetic."

The candidate played his trump card in connection with tincture belladonna. Asked to give the dose, method of administration, and therapeutic indications of this drug, he answered as follows: "Tr. belladonna is a slight purgative dose 30-60 m. it is administered by the mouth it is indicated in chronic constipation to dilate pupil."

The examiner made the following terse endorsement across this candidate's papers: "This man would have killed at least ten patients with these doses."

Gentlemen, this is not an isolated case. The records of the Illinois State Board of Health and of those of many other examining boards can show many similar. Neither is this the first time that this particular medical institution has presented to the Illinois State Board of Health a demonstration of the inadequacy of its teachings and examinations. What is the place in medicine of a day school that graduates a student who gives answers such as these, who, if permitted to practice would scatter death and destruction wherever he went, murdering not only innocent patients but the English language also?

There may be valid objections to the evening school. Obviously the course given in any evening school cannot come up to the standard of the day schools represented here tonight. It is useless to gainsay this. It is the opinion of the State Board of Health, however, that there is a place in medical education for a properly equipped, well conducted evening school, else the State Board of Health would not have conferred recognition on any evening school.

We should carefully scrutinize the evening school and, if it fails to maintain proper standards, unequivocally condemn it, but before passing judgment upon the evening school, we should not fail to also carefully scrutinize some of the day schools.

Dr. Baldwin: I want to tell you that it is a serious business running a night school. I am trying to make mine the very best night school in Chicago, the other night schools are trying to beat me and they are making me hustle.

I requested the Secretary to ask every one on the programme to visit my school, so that

each might speak from personal knowledge. They might modify their theories, after seeing what we do in practice.

The teaching faculty in my school is all good. I run the school (Laughter) there is no friction, no turmoil, nobody comes with a frown on their face; wouldn't do anybody any good if they did, they all just work hard. I would like to have any of you come down and inspect my school; I think it will change any narrow ideas that anyone may have who criticize without knowing.

A good many doctors are taking a course down there, it does not cost them anything; they are getting some of the foundation which they missed.

Dr. Julius Grinker: I would choke off all night medical schools. How can one obtain a proper education in these houses at night when the body is tired from working all day? Is there a demand for night schools? Of course there is, an artificial demand, stimulated by copious advertising. Did not the first night school in Chicago send out circulars broadcast, saying to all, "Why drudge all your life, when you can be a doctor for one hundred dollars a year?" I know Dr. Dickenson promised graduation to students. I had brought to me for signature the diplomas of men I never had seen and of whose qualifications I knew nothing. Neither I nor the teacher of another important branch signed those diplomas, and yet those men were graduated. They were even given a license to practice from the State Board of Health. When I protested before that body, the then Secretary, Dr. Scott, assured me that he knew these men. This was before the diplomas were presented to him. I do not know what influences were brought to bear upon him.

What sort of doctors are these which the night schools are making? Imagine the barber who shaves you for a number of years one day saying, "Congratulate me, I am a colleague of yours. I have just graduated from Harvey." A sausage vender took the course, but did not make a success as a peddler of pills, and so continued, as before, to be a seller of sausage.

The gentlemen who speak of the constitutional right we have to get an education at any time during the twenty-four hours forgets that the public also has rights that must be respected. Is it right and proper to juggle with the good nature of our unsuspecting neighbors and compel them to accept a mere substitute and an adulteration? We prosecute the substituting pharmacist, but we tolerate and protect in our own ranks the manufacturer of an inferior grade of doctor. Nobody can tell me that a man can go into a medical school and make good use of the course without preliminary training, and without devoting his days and nights to the study of the difficult problems confronting the practitioner of medicine.

The subject of medical education is one of the most serious problems that confronts our

profession to-day. Not undeservedly are we Americans looked upon as mere pretenders when we attempt to practice in foreign countries. And is it not the diploma-mill and the night medical school, both products indigenous to free America, that are largely responsible for this.

Dr. Stuart Johnston: It is not only the laboring classes who attend the night medical schools, many of the students are employed during the day as teachers. I went into night school work from motives not entirely philanthropic and altimistic, but I learned to think well of the night school pupils. I first came to a knowledge of them, then admiration and their affection.

Dr. Billings finished using arguments for my side. Who doubts that he and Dr. Senn, if night schools had been in existence in their time, would have availed themselves of them.

University extension lectures and the night schools are the great things of this city. They strive towards the ideal. We can never obtain ideal medical education any more than any other ideal, but we must ever strive towards its attainment.

The higher education is not an absolute requisite for success. I recall that a rail-splitter was a president of the United States. Dr. Billings laments his failure on account of lack of fundamental science. We all admire that failure.

Dr. Jos. Zeisler threw some side lights upon the subject. Many teachers accept positions in the night school, expecting the students, mostly residents of the city, to send them work. Students at these schools have been known to be so fatigued during lectures, that they actually fell asleep. The leader of one of the night schools admitted that his intention was to eventually transform his institution into a day school. The students of these schools will rarely after their graduation be willing to devote one or more years to hospital work or study abroad. They will become good business men in the profession, but will add little to scientific advancement. A comparison with evening law schools is not just; the students at these devote their day to work in a law office. The night school tends to cheapen medical education and to create a class of doctors who instead of elevating, must inevitably lower the plane of the profession.

The Chairman: Dr. Baldwin says there is present with us tonight a graduate of a night school who we will all doubtless be glad to hear.

Dr. Gotsche: I am a product of a night school. I earned fairly good wages but wanted to better myself and long wished to benefit myself, not financially but socially. I had always wanted to study medicine as far back as I could remember. As far as the hours were concerned I found them short. I arose at 5 a. m.; after one or two hours spent in study I went to work at 8. During luncheon time I found time to

study. I finished duties in the store at 5:30 and after a light supper, I hastened to school.

I attended the clinics or studied my books between 6 and 7. I took notes which I studied on my way home. If not too tired I spent an hour or two in study when I returned home. Studied all day Sunday. It was truly a strenuous life but I gained 25 lbs. I often went from the store tired out but found myself refreshed after an evening spent in the medical school.

Dr. J. A. Egan: The remarks made a few moments ago relative to the State Board of Health and the actions of the former Secretary, may have led some physicians present to infer that in the recognition of evening schools in 1896, certain strong influences were used, that the recognition was accorded hastily and without proper investigation. It would be well therefore if I were to set before you a statement of facts in the case. Much has been said during the past eight years relative to the action of the State Board of Health, in recognizing evening schools. I have received several communications on the subject, many not very complimentary in character. About a year ago my attention was called to a communication on this subject sent for publication to a leading medical journal. In this the Board was severely criticized and it was broadly hinted that recognition was secured only through great "influence and corruption." I replied at length to this communication (which by the way the editor saw fit not to publish) and furnished some information which had not been widely disseminated. I happen to have a copy of my letter with me tonight. With your permission I will read a few extracts. These read as follows:

"As stated, the board serving under the administration of Governor Altgeld, under the presidency of the honored dean of the College of Physicians and Surgeons, Chicago, Dr. Wm. E. Quine, recognized the Harvey and Jenner (Harvard) Medical Colleges. As you will see by the following brief statement of facts, the board carefully considered this matter, and recognition was accorded only after mature deliberation. The 'great influence and corruption' which exist in the mind of the correspondent, seemed to be powerful slow in action.

"In order to save time and space, I will refer to the Harvey only.

"The Harvey Medical College was determined 'not deserving of approval' at the September, 1893, meeting. See page XL, 16th Report. I see nothing in the 1894 minutes concerning this institution. A report on the Harvey Medical College was submitted to the board at the January, 1895, meeting by the Committee on the Administration of the Medical Practice Act. Dr. Wm. E. Quine and John A. Vincent (see page XXIV, 18th Report). The committee recommended that further consideration be deferred for one year.

"The College asked for a further hearing at the April, 1895, meeting. This was granted. (See page XXXIII, 18th Report.) A further investigation was ordered. (See page XXXIV.)

"On pages XXXIX-XL, 18th Annual Report

(June, 1895), you will find a further report of the Committee on the Administration on the Medical Practice Act. The Committee found that the college had improved and recognition was accorded for the year 1895-6 and thereafter.

"At this same meeting (See page XL), the Harvard (Jenner) Medical College was also recognized.

"The members of the board at this meeting were Drs. Wm. E. Quine (president), Oscar O. Baines, George Thilo and Sarah Hackett Stevenson,, all of Chicago, and Dr. Julius Kohl, John A. Vincent and B. M. Griffith, an association of men and women likely to be swayed by 'great influence and corruption.'

"You will see from the above that the consideration of the Harvey Medical College covered a period of nearly two years.

"I really must apologize to you for bringing up this matter to-night. The charges made are not worthy of notice, but did I fail to reply, my silence might possibly be misconstrued."

Dr. J. E. Stubbs, of the Faculty of Harvey Medical College, said that every diploma that was signed by them was investigated by him and he knew that the man was qualified in his branch at least. The faculty voted in each case before conferring the diploma. It is true, as Dr. Johnston has stated, that one of our greatest generals graduated no higher than the public schools.

A preliminary college education is desirable, no doubt, but very many men stand high in the profession and in the world at large that has never gone through college.

We need not go to the night schools to find students sleeping during lectures. He had seen them nodding and napping in the day schools; had even done the same himself.

His observations of night school pupils proved to him conclusively that all were there on business and that all worked hard. They worked by day at their vocations and studied by night, but they had no idle moment in the twenty-four hours. Men who thus acquired knowledge *ad astra per aspera*.

Dr. Humiston: As to the question of getting consultation business from teaching in the night schools, that applies as well to the day school as to the night school. To any student, the man teaching him is the best teacher possible.

When he requires advice afterward in his practice, it is natural that his mind should turn to his former teacher.

The night is as good a time to study in as the day. We most of us chose the night to be born in, you all travel by night to save a little time, trusting your precious bodies to an engineer and his crew, who are working at night.

Col. Fabian: I am a layman, but I am going to say a word or two about the night schools. When or where man acquires knowledge makes little difference, so that he acquires the knowledge.

I know something about the night schools in Chicago. I run a night school. I have 50 stu-

dents, between the ages of 14 and 17, who support themselves. That they must study at night is greatly to be deplored, but that they have the opportunity of studying at all is a matter for congratulation.

One speaker has said that the medical night schools produce only medical business men. I should like to ask you how many of you doctors are in the profession for your health. It would be a good thing if you would pay more attention to the business end.

My night school is not a charity; it takes in \$400.00 per month. But I can tell you night schools don't pay dividends. There is not a night school in Chicago with money to send to Springfield for the purposes of bribery and corruption. I would like to say to Dr. Baldwin, anent the money which he is going to put into his night school, that he reminds me of a story. An old farmer had a bull who broke out of the pasture one day and rushed upon the railroad track. The locomotive headlight of the first express was coming rapidly up the track. The bull, with lowered head, stood steadfastly in its path. The farmer said to the bull, "I admire your grit, but consarn your judgment."

Dr. Frances Dickinson.

Mr. Chairman, Ladies and Gentlemen: The place in medical education of the evening medical school is that which it already occupies and that which it may yet attain. Medical education at night was a radical idea—radicals are roots—so the idea was buried in new soil and the planting took place at an unusual hour of the day. It was watched, anxiously and tenderly cared for. It lived, grew, bloomed and multiplied. When these results were publicly compared with the blossoms of medical education given at other hours of the day they were found to belong to the same general rank and equally high.

Our soil consisted of adult brains of men and women who left school eight to thirty years ago when between the ages of twelve and sixteen years, not all necessarily because of economic necessity. The largest percentage of our best men leave school between these ages. The adolescent stage of child life takes from the text book school life the vigorous boy and girl, who will not go to school any more and sit still all day long. This child demands a change of occupation and must use his hands and feet and all his forces to answer nature's own call for healthy growth of mind and body.

This vigorous, healthy fellow in after life finds that he wants an education best attained in colleges and universities. He wants it for better social position, business purposes or for his own pleasure. His general life and business training has been a schooling. It has developed his capacity for work and thought, trained his powers of concentration and observation and increased his resources for application, quickened his ability to apply and enlarged his sympathetic knowledge of his fellow men. Shall all these attainments go to naught when he knocks at the college door and asks for admission? No, the least we can do

for this intelligent man, over twenty-one years of age with a record of more than five years in business, is to give him one year of the four years' course leading to the degree of A. B. or B. S. Help him to the opportunities to attain the equivalent of a high school diploma and college preparatory without much relation to the conventional time credit.

There are hundreds of these business men in our best families in all our large cities who will give back immediately to the community in which they live the benefits of up-to-date knowledge and who will thereby be grander and more forceful citizens.

The medical work undertaken at night does not fail to accomplish the medical training that Dr. Billings has so nicely described this evening as the proper medical education.

That the evening school has met in its short life with good results has been amply proven by the common public examinations to which the graduates of all schools have been alike subjected for the last five years. Harvey ranked second only to the North-Western in three out of five years, and never below the third in rank of the fourteen medical schools of Chicago before the Illinois State Board of Health.

Complaint has been made this evening that there are already too many physicians. It may be so, but not to the door of the evening medical schools can the complaint be laid. Harvey Medical College has given diplomas to only one hundred and fifty graduates in ten years, a number that each of the universities turns out every year. Who is filling the medical profession?

I have personally visited at least one-half of the medical colleges of the United States, particularly the universities in the East, West and North and several in foreign countries, and know that the equipment of our night school, for the number of students taught, excels in several departments, that found in any university in Chicago. In physiology, no university at home gives each individual student as many instruments to work with, as we do at Harvey. This laboratory equipment is necessary to the educational success of an evening school.

The description of medical education by the last speaker from the North-Western I fully agreed with. By the adoption of different methods of teaching than are used in the day schools, this best undergraduate training can be passed on at night. When the methods of imparting knowledge in the evening to adult minds shall be the same as used in the day schools to youths the night schools will be utter failures. Many day school boys are callow, soft and vealy youths, inexperienced and know no value of time and put no value to their parents' money. They must have extra side lights thrown on the subject being taught. The man and the woman student, who does not start until years after this little callow fellow has graduated to sign a death certificate at twenty-one unquestioned, does not need these side lights, he must have the pith of the mat-

ter thrown at him immediately and by teachers who are thoroughly conversant with their subject and in a way that involves not only the auditory and visual senses, but the tactile sense through his own fingers.

One hour lecture and two hours laboratory work and no man ever sleeps in his class and every one goes home more restful for the change of occupation, for doing in the course of the evening that which he wanted to do. When we live that way night and day our wrinkles go away. Night medical schools are wrinkle removers.

Each opposing speaker not only described an ideal medical education, but both reached the same conclusion, to-wit: that he did not see how this training could be accomplished at night. As alike are these opposition view so equally alike is the value of these views.

Experience as well as speculation are both necessary to attain the best judgment and reach the most trustworthy conclusions. These well-known speakers and forceful gentlemen have only speculation to offer you in opposition to the night school. Neither has had one particle of experience in night medical school work, and I doubt if either has ever entered an evening school of medicine. Their thought is the best as far as it goes, but without experience and personal knowledge necessary to the best of judgment their conclusions are only half the truth.

The last speaker thought that principles could not be grasped after the sun went down that only ideas could be pigeon-holed. When all of the principles of medicine are gathered together and presented in their most forceful manner it does not take many storage rooms of even pigeon-hole size. The adult mind more readily sees the application of general principles. The business man has learned to meet people, he knows how to come in contact with people in a manner necessary to a successful physician, which is only learned by contact with people and never can be taught in universities, colleges or high schools.

The adult enters the evening school with this unattainable-in-college training already attained. This is very noticeable in the manner in which he approaches clinical patients, whether in the dispensary or at the bedside, and in his conduct during school hours.

The evening school has still further the advantage. In the arrangement of its schedule and methods of management, it is not bound down by any antiquated arrangements or distribution of faculties. It is free to adopt the latest and most approved methods in all departments and, therefore, should more quickly give evidences of its work being based on the most modern scientific methods.

It has been admitted here this evening that day school students work for their living, too. Who has the more energy for his work? The boy who is hustling around for a job, and may be begins work by four in the morning, or the older boy who is employed from day to day the year around and possibly has been in the same work for many years, to whom the evening

work is a relief and a pleasure and "goes with the grain."

Modern scientific education has a claim upon every department of public and private life and as the first two years and the preparatory year of the present medical curriculum is up-to-date scientific thought there should be opportunities for people in all walks of life, public and private, to obtain this knowledge during evening hours. In medical professional training one attains a higher grade of culture and a greater variety of resources of knowledge that may be applied to every department of living, than is found in all the studies leading to any other degree in the educational world, and, therefore, one is lead into better paths towards happiness.

Heckel says that the ignorant member of a civilized community is surrounded by enigmas in every step, as is the savage, and that ignorance and indolence, not malice, are our most dangerous enemies.

Men of brains, intelligence and experience in the business world have come to realize that a grand opportunity for greater usefulness, happiness and better citizenship is now given them in the best equipped evening medical schools.

Harvey Medical College was the first to confine its lecture and laboratory work to the three hours of the evening, seven to ten, and distribute the majority of its clinics to other hours of the day and night. I have had the honor to be its working head for ten years, starting with nine students in September, 1894. It became the fourth in number of students in four years and has not yet lost that rank.

Clinical material and time for clinics are both abundant. What proportion of a student's practical obstetrical work can be done in the day time? Very little every one knows—Harvey has matriculated in ten years over twelve hundred students.

Dr. Billings: "How many of those that you matriculated graduated?"

Dr. Dickinson: "Only one tenth." We let adults in easy because the ordinary methods of entrance tests are an injustice and a farce applied to adults. We let them in comparatively easy, but they must show capacity, ability to carry and do their work or they never graduate. A goodly number leave to graduate in day schools. Night school teachers must spend as much or more time to prepare the lessons which they teach than it takes the students to learn them.

The emphasis given by the gentlemen from North-Western College to the study of fundamentals is fully in accord with the work at Harvey. The adult mind prefers to take the most elementary work in the sciences first. These principles once grasped, building upon them is rapidly and intelligently done by adults.

We all may remember successful men who told us that their study was all done by candle light, as they had not advantages of early

schooling. Should we then decry the study that is done under electric light or the white mantle? These also are better than the unsteady day light for microscopic work. Does the sun shine every day and all day long? Evening schools are always prepared for no sunshine, and never suffer by the moonshine of old worn-out gas jets. The white mantle light shines alike upon every table.

If I were running a day school, the lecture and laboratory work would all be done at night. Clinics in the afternoon and the students' leisure time be allotted to the morning hours when the least harm could come to him.

Two years' evening work in chemistry could hardly be sufficient, says the gentlemen from the North-Western. We heartily agree with him. Harvey runs the course of chemistry through three years, and the course of physiology through three years. This is just a little evidence of what I said before, that the schedule and the methods of teaching can not, in hardly any way whatever, be similar to the day school work, and the night school be an educational success.

A medical institution for research work and a medical institution for degree giving are two different institutions, and the hour of the day does not make either of them failures or successes.

We suggest that the Physicians' Club spend an evening in the place of a day school in the medical profession, to assist in allaying low grade commercial competition.

Fundamentals are well grounded in the adult mind in the evening medical school. The few or the many who wish these fundamentals and the first stories of knowledge that may be built upon them should not be debarred from these attainments because their only leisure time from the strife for bread and butter is in the evening. The intelligent few are always the marrow of the back bone of true civilization.

Evening schools do not compete with day schools. There are no fewer students in day schools in consequence of evening school existence. There are no fewer people crossing the ferries because the Brooklyn bridge was built. We feed the day schools thousands of dollars worth of students every year.

Yes, the evening school even dared to compete with university work, and just as soon as the examinations were made by a public board of examiners and given to graduates of all schools alike, the Harvey Medical College dared to pass even higher than all the universities but one, and that the North-Western.

Most adults, in order to exist, have employment through the day. Their work is often distasteful and uninteresting, which creates a lack of harmony between worker and work. Let the worker know that the end of the day he can do something for his own individual betterment, and then note the change in the disposition and accomplishment of his daily duties. Employers are beginning to realize this

desirable change and also that more intelligent returns are to be had from the man and woman who has had scientific training. Employers are no longer opposed to night time training.

At no time in its history has Harvey failed to stretch out its arm to employer and employed alike in their effort for individual betterment, knowing too well that out of the individual grows the aggregate, and that time which proves all things to the observing, will prove the worth of the effort.

Henry T. Lewis, Secretary.

CHICAGO LARYNGOLOGICAL AND CLIMATOLOGICAL ASSOCIATION.

A regular meeting was held December 6, 1904, with the President, Dr. John Edwin Rhodes, in the chair.

Radical Operation on the Sinuses, by the Killian Method.

Dr. Joseph C. Beck: The case I wish to show this evening is one of radical operation on the sinuses, by the Killian method. This man is interesting, not because he has had a Killian operation performed on him, but from the anomalous condition that presented itself during the operation, and the course of the disease. He is interesting also on account of the general symptoms he presented outside of the local ones. These general symptoms have been very clearly described by Hajek as being neuroses. When patient was in a large crowd of people he would perceive the peculiar odor of urine from his head, which became so disagreeable to him that he would run away from the crowd. Then there were pressure symptoms in one of his eyes, so that he could not see at times or very dim.

The patient was sent to me by a surgeon three years ago to get his nose free to respiration, because he could not be given an anesthetic. On examination I found large masses of polyps in both nostrils, and about two months after the operation on his stomach he returned to me for the treatment of his sinus trouble, which required intranasal treatment. I proceeded in the usual manner to ablate the middle turbinate bodies, resorted to intranasal curettage, and succeeded on the right side in stopping the suppurative discharge. I made four operations on this (left) side of the nose, currying the cavity, but failed to stop the discharge, finding that the cells high up and laterally were secreting pus. I therefore recommended a radical operation by the Killian method, and as you are all familiar with the technique of it, I will not mention it.

Killian describes a very large frontal sinus in which it is not possible to carry out his technique properly. After the usual cut was made, with retraction I was unable to expose the entire sinus, and I satisfied myself in leaving a portion of the anterior wall of the sinus without taking it off. Three weeks after the oper-

ation the patient returned with a bulging on the front of the head, and I found there was a retention of pus. Readmitting him into the hospital, I reopened and found the sinus was full of granulations and pus oozing out. I extended the incision upwards in order to expose the entire sinus. I removed the entire wall and re-established drainage into the nostril. Since then the patient has been comparatively free from any trouble. I do not wish to say that there is no suppuration here, because there is a little at one point. If you wipe it off and wait for twenty minutes, you will find there is a little pus which comes out from one of the cells, and I may have to reopen that through the nose and curette it. It is four months since the operation, and the frontal sinus is entirely obliterated. I cut down the floor of the frontal sinus and removed the upper wall of the orbital cavity.

Case II. I wish to show you another case that I exhibited at the last meeting. It is a case on which I made a plastic operation on the nose. I showed the patient before the operation, and since then I have succeeded in grafting a flap from the front part of the forehead into the nostril, and it has healed in.

Dr. O. J. Stein: I present this boy, who is 15 years of age, more as a case for diagnosis than anything else. He first came under observation in April, with a small growth in the right nostril. This was removed by a physician. He is said to have cut out a "piece of flesh," with a pair of scissors, threw it away, never examined it, and I do not know what the nature of it was. About four months after this the patient came under the care of Dr. Kleene, and at that time his nostril appeared a little worse than it does now. The whole floor is involved in a chronic suppurative process, with perforation through the cartilaginous septum. The left nostril was also involved in the suppurative process. There has been extensive necrosis of the intranasal tissue and marked infiltration of the turbinates, and, in fact, of all the intranasal structures. At one point I discovered exposed bone in the floor of the nose. The tonsils seemed to be involved in the same suppurative process. I saw the boy first I think about two months ago. I have not been treating him, as he has been under the care of Dr. Kleene. Several physicians have seen the patient and have given various opinions as to what his case may be. The wound, you will observe, looks clean now.

There are several points of interest in connection with this case. The history is practically negative, as far as syphilis and tuberculosis are concerned. When I saw him last the upper lip was so thickened and infiltrated that he could scarcely talk. His nostrils were bathed in pus, and the tonsils were necrotic. The parenchyma of the nostril is friable. It breaks away when you touch it, and bleeds readily. There is pus on the pharyngeal wall, and both nostrils contain some necrotic tissue. I thought it was a malignant condition at first, and said it might possibly be sarcoma, but after thinking the matter over I thought it might be a syphilitic process, and therefore advised that the boy be put

on antisyphilitic treatment. This was done, and kept up for two months, but there was no improvement under that treatment. I removed sections of tissue from the right and left nostril, and from the tonsil; had the tissues examined, and it was reported to me that the diagnosis lay between sarcoma and inflammatory tissue. I took another section later on, about a week afterwards, and the report given to me was the same, but leaned a little more toward inflammatory tissue. The parties who examined these sections did not commit themselves. Slides were examined recently for tubercle bacilli, and Dr. Kleene says that they found something which looked like tubercle bacilli, and, in fact, in three or four slides he found a couple of tubercle bacilli. At one stage of the case it looked like a typical case of lupus.

In the way of treatment, the boy has received nothing but cleansing of the parts and dusting powders, with tonics and mercury and iodides internally. The adenoids which the boy had were removed by Dr. Kleene, and the wound healed very well.

I simply present the case for diagnosis, and shall be glad to get the opinions of various members regarding it.

Total Extirpation of Larynx; Resection of Most of the Pharynx and Part of Oesophagus in Carcinoma.

Dr. Herman Stolte: I have the honor to demonstrate an interesting specimen which represents a very far advanced, partly ulcerated carcinoma, very likely having started out of the sinus pyroformis, and having involved the whole larynx, the upper part of oesophagus, the lower pharynx, the left half of mesopharynx, including the left tonsil and part of the basis of the tongue. These parts were extirpated and resected four days ago from a man 49 years old, who began to complain about hoarseness not until seven months ago, and consulted a physician not until six weeks before his operation, when the diagnosis of inoperable carcinoma was made. A week from to-day he was sent to me to relieve him from his suffocation.

The patient was extremely emaciated, due to the impossibility to swallow, and suffered very much from dyspnea. As he had to undergo for relief of his ailments at least a tracheotomy and a gastrotomy, I determined to relieve him from his desperate and very sad condition by a radical operation in the diseased area. When the patient was laid on the operating table, he had a suffocation fit, and I had to hurry up to restore him by quick cricotomy by means of Butlin's obturator-cannula, without an anaesthetic. After succeeding herein, the narcosis could begin through the cannula. As there was to spare every drop of blood with regard to his bad, anaemic weak condition, especial attention was paid to this point and to a very careful narcosis, which was often interrupted by giving oxygen inhalation and hypo-dermical salt infusions. The course of the operation in which I followed closely

Gluck's experience and advice given in his last report, was following.

Two horizontal incisions extending from the middle of the right to the posterior border of the left sternocleidomastoid muscle, were performed the upper incision being made in one level, with hyoid bone, the lower one just below the cricoid cartilage. These two incisions are connected by a vertical anterior incision in the middle line of the neck. Skin and fascia are dissected off to both sides. Sternohyoid and thyrohyoid muscle are cut across on both sides on a level with the lower border of the cricoid cartilage. On the right side the muscle strings remain in connection with the skin flap. Not on the left side. Here they are sacrificed, as they are already involved by the cancer, which broke through the left thyrooid cartilage and pharynx. Ligation of the thyrooid superior artery on both sides. Both upper poles of thyrooid gland are dissected back from the larynx and retracted downwards, the left upper pole being resected, as carcinomatous. Incision of tough facial layer, which lies in front of trachea and retraction of thyrooid isthmus, until the first four tracheal rings come into view. Lateral aspect of the four rings are dissected free. Posterior surface of trachea allowed to remain undisturbed. Sternohyoid, thyrohyoid omohyoid insertions to the hyoid bone divided, and the right and left superior laryngeal artery tied off and divided, after having resected the upper horn of thyrooid cartilage. Now the entire anterior aspect of larynx was free.

Division of the Trachea.

Cricotracheal ligament divided and two guide sutures are passed through the anterior wall of trachea. By traction on these and on the sharp hook inserted in the cricoid. The tracheal wound is made to gap. Now the trachea is divided from cricoid along its whole circumference, and the oesophagus is peeled from the trachea for a distance of two centimeters by blunt dissection. The tracheal stump is drawn now to the level of the lower border of the lower horizontal incision, and here, with its anterior border sutured in by exact mattress sutures. To form a button hole in the jugular for suturing in the trachea, there was not enough room, as the lower horizontal incision was made a little too far downward, due to the right-field being covered by the cricoid canula and its tampon. Both lower angles of the skin flaps were sutured exactly to the posterior surface of the tracheal stump. Now the tracheal opening is surrounded on all sides by skin and protected from blood flowing into it.

The anaesthetic is given now through a tracheal canula. On the right side now the pharynx wall (inferior constrictor muscle and mucous membrane) is divided from the lateral larynx wall between clamps, a narrow, longitudinal piece of the pharynx is saved here and not detached from vertebra. On the left side the carcinoma involved the whole pharynx

and part of oesophagus, therefore the upper part of oesophagus and lower and mesopharynx remains in connection with larynx and are peeled from the vertebra by blunt finger work. Now above the hyoid bone malohyoid and geniohyoid muscles are dissected from hyoid bone (upper surface epiglottis ligaments are dissected), and having divided the thyrohyoid membrane above epiglottis close below hyoid bone in its whole extent to the horn, the middle and left part of hyoid bone is resected. Now the whole inner pharynx above the epiglottis comes into full-view, drawing the tongue root upwards, the thyrooid cartilage downwards.

The carcinoma is now seen to extend but to the upper limit of the left tonsil along the lateral pharynx wall. Therefore the tumor is circumscribed in healthy tissue and then completely shelled out with the finger in a blunt way, downwards. The lateral pharynx wall of mesopharynx and the posterior wall of pharynx is severed from the healthy parts by clamps and scissors. As the basis of the tongue below the posterior pillar of palate feels also somewhat hardened or infiltrated, these parts of the tongue are resected. In dissecting the lateral wall of mesopharynx the pharyngeal artery was hurt and tied with great difficulty. Now the diseased, everywhere dissected area in whole is taken out, pharynx, larynx, part oesophagus, the latter cut off one centimeter downwards from the diseased area above.

The stump can just be caught and after circular suture of the edges, it is fixed to the praevertebral muscles by a suture. A rubber tube, inserted in it, is fixed to its wall by a suture. The irregular remainders of the upper or mesopharynx, basis of tongue are sutured together with great difficulty in order to guarantee a closure against the wounded cavity as tight as possible to prevent mouth contents from flowing down and infection of the wounded cavity.

The whole cavity, especially all angles and corners as around the upper pharyngeal stump, and around the oesophagus behind trachea are carefully packed with iodoform gauze tampons, over which the skin is sutured.

Two long gauze tampon strips were passed out of the lower end of the wound for drainage purposes. Over the skin came an easy gauze compressive bandage.

Patient was ordered not to swallow but to spit out everything. Toward evening he was sitting up in bed and got his first feeding through the tube, inserted in the oesophagus stump. On the fourth day after operation he is absolutely free of fever and does not show any sign of irritation of the lungs.

As soon as the vitality of the patient is so much restored that he can stand a second operation I am going to remove the left sternocleidomastoid muscle, resect the internal jugular vein and all superficial and deep glands on the left side.

In about six weeks, he is going to get an artificial pharynx (rubber funnel with tube fitting in the funnel in back of his mouth), the remain-

der of the pharynx. The tube being passed through the pharynx and stump and led down in the oesophagus closed. With Prof. Glucks artificial larynx he will be able to speak again, provided he stands the second operation.

Discussion on the Cases of Drs. Beck, Stein and Stolte.

Dr. Otto T. Freer: It was not my intention to speak on this subject, but since Dr. Holinger regards the affection of Dr. Stein's patient as a tubercular one and refers back to a case of mine presented to this Society a year or more ago, as also tubercular, though at the time I think I proved it to be not so, I cannot refrain from saying a few words. In the case before use, all histologic proof of tuberculosis is lacking, as it was the case of mine in question. In both instances microscopic examination of excised tissue was made, negative as to tuberculosis in both. Now there is no disease process histologically more characteristic than tuberculosis, for even though in the ordinary slower cases tubercle bacilli are often not found in the tissues, at least giant cells and epithelioid ones in characteristic grouping are practically constantly present and in addition almost always some cheesy foci are discovered, while where the tubercular process is malignant, causing rapid ulcerative breaking down of tissue, though in some regions the histologic appearance may be less characteristic, tubercle bacilli are nearly always found in the tissues and sometimes in great abundance.

The clinical picture in this case is certainly not in accord with the theory that the very destructive process presented is tubercular, nor would this process be likely to be arrested as this has been if tuberculosis were its cause. Not only would such a rapid tuberculosis as this would be not to come to a standstill, but it would be associated with grave constitutional symptoms, emaciation, hectic fever and probably, especially in one so young, involvement of the lungs, for tuberculosis increases in malignancy in proportion to the youth of the patient. The fauces and palate are ordinarily not attacked by tuberculosis unless the disease be of a grave type with profound general symptoms, yet the disease process presented by this healthy looking boy has invaded the fauces and palate extensively. As an example of the malignancy of tuberculosis when it involves the fauces I cite the case of a young woman whom I saw in the clinic at Rush Medical College. She presented an infiltration of the anterior and posterior pillars of the fauces on the right side, with pinhead ulcerations of the soft palate. The tonsil was apparently healthy, merely the pillars being involved in thickening and nodular infiltration. I cut away a large portion of the anterior pillar and made microtome sections of it, which showed giant cells, epithelioid cells in typical tubercular arrangement and tubercle bacilli in the tissues. The young woman was at that time in fairly good health, although she was having a temperature of 101°

to 102 in the afternoon, as stated by her attendant. When I heard of her, four weeks later, she was practically moribund. The diagnosis had hardly been made when we learned that she was dying from tuberculosis.

A number of years ago, in a conversation with me, Dr. Casselberry alluded to his experience with the rapidly fatal course of pharyngeal tuberculosis.

For these reasons I do not think that Dr. Stein's case is one of tuberculosis.

Dr. Freer: The process in this case has involved the fauces and soft palate, and that is a different story. The disease is not confined to the anterior part of the nose, but as I have stated, it has invaded parts in which tuberculosis usually pursues a very rapid course.

Dr. William E. Casselberry: I would like to ask Dr. Stein by whom the histological examination was made.

Dr. Stein: It was made by Dr. Evans, of the Columbus Medical Laboratory. He did not report finding tubercle bacilli. There was nothing in his findings typical of tuberculosis at all, but an examination was made recently for tubercle bacilli, and there were a few found by Dr. Kleene, but while this was suggestive, they did not take the actual stain.

Dr. Brunson: To what extent was antisyphilitic treatment used in this case?

Dr. Stein: It was used for about two months. In addition to the antisyphilitic treatment, the patient has received tonics, and while there is considerable glandular enlargement, in the main he has improved as to local appearance, but the general appearance is about the same.

Dr. P. J. H. Farrell: In cases of this kind the local use of bichloride, 1-500, gives excellent results. Where other treatment had been carried on for eight or ten weeks, without any beneficial results, by using topical applications of bichloride it has cleared up the diagnosis very nicely. I have the patient use the solution three or four times a day. I formerly depended upon calomel as a local application in syphilis of the nose, but results are better by using the bichloride solution. This case, I think, will prove to be syphilis.

Dr. Joseph C. Beck: I had the pleasure of seeing this case at Dr. Stein's office about six months ago, when we made a careful examination. Dr. Stein did not mention the condition of the teeth, and did not tell us about the condition of the patient's mouth. At the time I saw him the appearance of the mouth and nose was about the same as it is to-day. I believed at that time that this was a case of syphilis, and suggested mercurial inunctions; also that the tuberculin test be made. I understand from Dr. Stein, however, that this test was not made. From the condition then and the condition of the teeth, my diagnosis would be syphilis.

Dr. E. Fletcher Ingals: I would not hazard a diagnosis in the case under discussion, but

in all of these obscure cases it is not worth while to spend much time in looking for a rare disease, for in ninety-nine cases out of a hundred they are syphilitic. Of course, the hundredth time we may make a mistake. I do not think this boy has tuberculosis, and if it is not tuberculosis it must, excepting under the remotest possibility, be syphilis or sarcoma. The boy's nose is pretty thoroughly filled an inch back from the nostril, and at first sight appears like sarcoma, but from the extension of the disease to both tonsils and the pharynx, and from the comparatively long duration of the affection we might almost exclude sarcoma.

With reference to Dr. Stolte's case, he did a most skillful operation, and one that many of us would hesitate long before undertaking. I shall be much interested in the outcome. He has had one good fortune, in that the patient has lived so long (2 days) after the operation. As he stated, there was "nothing to lose," as the patient understood the dangers and desired the operation.

Dr. Clifford S. Losey read a paper entitled *Myringoplastic Surgery, with Exhibition of a Case.*

We find in the literature of deafness and its relief that mechanical devices have been used since the days of the ancients, with the hope of restoring hearing, but more particularly since the sixteenth century have these devices been made and improved upon with more or less success.

The type of deafness which will be considered in this paper is that form which follows chronic suppuration. How often do patients come to us complaining only of deafness, when on examination we find the ears discharging, a fact they frequently seem to ignore. What they desire is hearing, and I regret to say the otologist is frequently unable to accomplish the desired result.

From now on let it be understood that these ears have become dry through some mode of treatment and are in the so-called cicatricial stage.

Many forms of artificial drum-heads have been invented—those of Toynbee and Yearsley being probably the best known—and have been used with some success. The best form of artificial drum-head that I am familiar with is one used by Dr. Pierce. The method of preparing it is as follows: Place on the blade of an ordinary spatula a small amount of paraffin, hold over a Bunsen flame and allow it to melt. Now, before it has time to cool place over it a few strands of crossed cotton fibres and press tightly. On cooling the paraffin is imbedded in the meshes of the cotton and is readily removed from the blade in the form of a very thin layer. This is cut to size a little larger than the perforation and placed in position with forceps. This disk is aseptic and can be medicated with almost anything that is desirable. It is pliable enough to be molded to any surface and has

sufficient adhesive power to hold it in position. However, any artificial drum-head is occasionally irritating to the ear, and if worn continuously, very frequently causes a return of the suppuration. The object, therefore, to be obtained, is a new tympanic membrane.

Berthold, who has written most extensively on this subject, decries the use of caustics and applications of stimulating drugs to the edge of old perforations, saying they produce very little results. In 1878 he was the first to transplant skin from the arm to the tympanic membrane. About 1880 he began to experiment with the membrane lining of the shell of an egg. His method was to roughen the edge of the perforation and apply a portion of the membrane cut a little larger than the size of perforation. First he applied the inner side of the egg membrane to the perforation and found that it remained adherent for a few days, then it became dry and shriveled up. Following this, he experimented with the egg membrane by planting it on the periosteum of the guinea pig. He found that when the innerside of the membrane was applied to the periosteum it was the same as when applied to the tympanic membrane, but when the outside of the egg membrane was applied it was found to retain its color and size, and in a short time leucocytes began to appear, then granulations and finally blood vessels. Within six or eight weeks this membrane was found to be firm and adherent to the periosteum and hard to differentiate from it. The process of applying the outside of the egg membrane was now tried on the tympanic membrane, and contrary to the other mode of application the membrane remained adherent and the same process occurred as when applied to the periosteum. After about eight weeks it had taken on the color of a normal tympanic membrane.

The cases for myringoplastic work of course are selected. The hearing should be tested, then the best form of artificial drum-head should be applied, and the hearing again tested. If there is no improvement in hearing with the artificial drum-head, closure of the perforation should not be attempted, because when the perforation is closed sound waves must pass through the ossicles, and when they are ankylosed or adherent, such will not be the case, where, with the perforation, sound waves are received directly on the foot plate of stapes.

I do not wish to lay any claim for originality in bringing this method before you, but with the hope of stimulating interest and discussion and trying to find the reason that it, or some other method, is not more frequently used, because when the results are good they certainly pay for any amount of time and patience they may have cost.

The technique is as follows: Given a selected case with a dry perforation; increase of hearing with artificial drum. We now clean the ear as thoroughly as possible with cotton pledgets, wind tightly a small piece of cotton on a small applicator and saturate with tri-

chlor-acetic acid. Now, under good illumination, touch the edge of the perforation, taking care not to allow any of the acid to come in contact with the promontory. It is well to inflate the ear before making the application so as to push the tympanic membrane as far away from the promontory as possible. Following the application there is immediately found a white eschar, showing where the acid has been applied; there is also some sharp pain lasting for a few minutes. A pledget of cotton is now placed in the external canal and the patient directed to return in two or three days. At this time, on inspection, there is found a crust formed over the edge of the perforation. The crust is loosened by the application of some light oil, such as liquid alboline and taken out with forceps. The ear thoroughly dried. Now, the edge of the perforation is found to be red, with beginning formation of granulation tissue. The ear is inflated and the tri-color-acetic acid again applied as before. After the second or third sitting one can generally see that the perforation is beginning to close. The applications are repeated just as often as the ear will stand it, depending entirely upon the amount of reaction. The main thing to guard against is adhesions of the tympanic membrane to the promontory. Different tympanic membranes react differently. Some will rebel against the use of the acid, and consequently the applications have to be made less frequently; again, some membranes regenerate very rapidly under slight stimulation.

The closure of large perforations is a slow procedure at the best, and requires time and patience, both by operator and patient.

I don't want to appear too enthusiastic on this subject, but it seems to me we have not given it the attention it deserves.

A Case of Myringoplastic Surgery.

Mr. O. A., 26 years of age, packer in a wholesale grocery store, presented himself at Dr. Pierce's clinic at the Chicago Polyclinic Post Graduate School in August, 1900. He complained at that time of hardness of hearing, with a purulent discharge from both ears since childhood, following scarlet fever, gradually getting worse. There was no pain or tinnitus. His family history was negative.

On inspection the canals were found to be bathed in a thick discharge, which had a foetid odor. After cleaning with pledgets of cotton, the tympanic membranes were found to be destroyed with the exception of a part of the membrana flaccida and anulus of membrana tympanica. The muco-periosteum covering promontory was granular; part of the handle of both mallei necrotic.

The hearing for conversational voice was 18 in., whisper 1 in., for both ears. The first step in the treatment of this case was to stop the discharge, which was done by packing with dry boric gauze. After the ears became dry they were again tested with practically no improvement in hearing. They were tested with artificial drums (pledgets of cotton saturated with liquid alboline and placed against the

ossicles). Hearing in both ears was very much improved. Then came the question of the advisability to close perforations. Upon the suggestion of Dr. Pierce, the edges of the perforation in the left ear were stimulated by the application of tri-chlor-acetic acid. The second day after the first application patient again presented himself, and upon examination there was found to be a crust formed over the rim of the perforation. This crust was loosened by the application of liquid alboline, taken out by forceps. Tri-chlor-acetic acid was again applied, patient returning again on fourth day. After removing the crust at previous sitting, it could be seen that new tissue was beginning to form and the applications were continued at intervals of two, three or four days, depending upon the amount of reaction; occasionally there was found to be a slight mucous discharge, due to over-stimulation. After about four months of repeated applications the tympanic membrane again became intact. The ear was again tested, and hearing for conversational voice was found to be about normal in the ordinary room, whisper could be heard distinctly at about four feet, the mobility of the new tympanic membrane being good.

The result of the left ear was so gratifying it was decided to try the same treatment on the right, and the same results were obtained, with the exception of the mobility of the membrane, in the right ear there is a small adhesion in the posterior portion. It has now been about two years since patient was discharged, and the result is still very gratifying to me and a great comfort to the patient.

Discussion.

Dr. Norval H. Pierce: I had the pleasure of seeing this patient when he came to the Polyclinic, and I had little hope of the perforations closing at that time. The perforations were very large and involved nearly all of the pars tensa. That these very large perforations can be closed is very gratifying. Trichloracetic acid is used for the closure of these perforations at my clinics of the Illinois Eye and Ear Infirmary and at the Polyclinic. I believe that these cases are neglected more than they should be. It is a rather trying ordeal to go through with on part of the patient and physician, but I know of no better method of closing the perforations than by means of this procedure. I have tried the skin of the egg; I have tried skin flaps; I have tried collodion, but I have found no method as universally successful as the one that has been described. But even with this method (trichloracetic acid) we are not always successful.

The artificial drumhead Dr. Losey mentioned is a very simple and satisfactory way of temporarily closing these perforations. I have occasionally etched with trichloracetic acid, and then applied the drumhead, and seemingly without irritation. In many cases there may be a slight transient discharge after the edges are etched, but that is not to be feared. Dr. W. J. Montgomery told me of a case in which he applied the artificial membrane in both ears, and the patient went away and did not return for

something like eighteen months, when both perforations were found to have closed, and the artificial membrane was still up against the new tympanic membrane.

Dr. Geo. E. Shambaugh: I desire to congratulate Dr. Losey on the excellent result he has been able to obtain in this case. I remember seeing this case five or six years ago, and I recall distinctly the appearance of his ears at that time. There was almost complete destruction of the pars tensa of the membrana tympani in both ears. The ossicles were not disturbed. At that time I demonstrated him before the class as a case where the hearing could be greatly improved by the use of the so-called artificial ear drums. By placing a small pledget of cotton dipped in vaselin against the remnant of the membrana tympani his hearing for the whispered voice was at once increased from one foot to about fifteen feet.

The use of such devices to improve the hearing is rather limited. In the first place there are few cases where an improvement is obtained where such a device is worn, and in the second place there is only a limited number of these cases where the ear will tolerate the foreign body in the ear. So that, when everything is considered the number of cases is rather small where the use of an artificial drum membrane is justifiable. The case must be one where the hearing is so defective as to make conversation difficult, it must be one where the application of the device improves the hearing sufficient to justify itself, and it must be a case where the ear will tolerate fairly well the wearing of the instrument.

Artificial drum membranes have long been a favorite catch work for quacks, and many high priced devices are advertised under this heading as a certain cure for all deafness irrespective of its cause.

I recall seeing a patient in the Dispensary who had paid some druggist \$10.00 for two little membranes which ordinarily cost five cents each and had worn them in her ear until on one side it had produced an ulceration of the membrana tympana, and suppurative otitis media, while all the time her deafness was due to trouble in the internal ear, and could in no possible way be benefited by any device of this sort.

Dr. Randolph Brunson: I have a case to report in connection with Dr. Losey's paper, which I saw recently, in which there was suppurative in both ears, with perforation. The perforation in left ear was in the inferior posterior quadrant of the drum, and the patient called my attention to the fact that he could hear better with that ear if oil or something else was put into the ear. I wiped out his ear thoroughly and took some glycerine and closed the perforation. About a drop was sufficient to produce perfect closure of the perforation. I tested his hearing before this and he could hear a loud conversational tone at about twelve or fourteen inches. After the glycerine was applied, for talking in an ordinary conversational tone he could hear at about eight feet. After finding this out, I thought of the method of treatment by trichloroacetic acid, for closing the perforation, applied it and I

think after about the sixth application, which was given four days ago, the man can now hear the ordinary conversational tone fifteen or eighteen feet away. The perforation is almost closed, and I should say there is possibly a space as large as a pinhead still remaining. Hearing has been so materially improved that it is surprising to me we can get such results in such a short space of time, and at the same time close up the perforation so satisfactorily.

Dr. J. Holinger: The results the doctor obtained in closing perforations in chronic suppurations are very good ones. He reported two cases. Before our judgment is final we should have larger numbers. The greatest difficulty always is to get the middle ear completely dry, i. e., to stop the suppuration. That being accomplished the opening usually closes. In a number of instances I have been surprised to find the perforation closed in a comparatively short time, when I did not expect it would ever do so.

The application of trichloroacetic acid is very satisfactory, and I think most of us have had more or less experience with it, good as well as bad. The satisfaction it gives us in one case was upset by other unfavorable results, where, after the application of trichloroacetic acid, no matter how carefully it was done, suppuration loomed up anew and with it all the symptoms of acute inflammation of the middle ear.

As to the use of artificial drumheads, I trust you will pardon me for digressing a little from the subject under discussion. There are a great number of artificial instruments on the market for the purpose of increasing or improving hearing. Very few have stood scientific tests. Sooner or later we should take a positive stand in regard to their use. An electric instrument called "acousticon," is advertised very extensively. It has been bought by a number of patients, and discarded sooner or later. The Committee on Awards of the St. Louis Exposition gave it a gold medal. It seems to me we owe it to the profession as well as to our patients after careful tests to take a stand in favor of or against such instruments and inform the public what we think of them.

I made a short test of these instruments in St. Louis and found that with them the accidental noises were so much increased that they drowned the voice, making it impossible to hear an ordinary voice. I think we can accomplish a great deal of good both for the profession and for our patients by presenting the facts in regard to these artificial aids.

A Case of Recurrent Fibro-Lipoma of the Pharynx and Larynx.

E. Fletcher Ingals, M. D. This patient S. W., a man 28 years of age, came to me February 9, 1899, complaining of difficulty in breathing, speaking and swallowing. He stated that five years previously he had noticed a little difficulty in breathing at night; later that the speech became muffled and that two years later he began to have some difficulty in swallowing though there had been no pain on deglutition. In the fall of 1896 the growth had been cauterized by

the electro-cautery and various efforts had been made with a snare and scissors to accomplish its reduction, but only very small pieces had been removed, although this, he thought, gave him little relief for some months. He afterward grew gradually worse. Immediately before he came to see me the interference with swallowing had been moderate, but there had been much difficulty in breathing especially at night.

I found the voice much muffled, with dyspnoea upon any exertion, but he breathed fairly well when at rest. Upon examination, I found a large tumor having the appearance of a fibroid nearly filling the laryngo-pharynx leaving a space only about $\frac{1}{4}$ of an inch in width at the left of the laryngo-pharynx. I was unable to see any part of the larynx excepting the pyriform sinus and the pharyngo-epiglottic fold of the left side. After several attempts with a No. 5 piano wire snare which broke each time, I finally succeeded in removing the greater part of this tumor with a uterine ecraseur and armed with a No. 8 piano wire, the end of which I had bent for the purpose. I subsequently removed several small pieces and finally destroyed by cauterization the last remaining nodule so that on March 20th, about 4 weeks after the first operation, the growth appeared to have been completely destroyed and the patient was discharged. The Pathologist reported the first mass removed to be a fibrous growth and the later masses lipomatous tissue. The whole tumor was about 4.5 by 3.8 c. m. in its various diameters. This case I reported to the American Laryngological Association in May, 1899.

On the 2d of November, 1904, this patient returned to me and reported that he had noticed some symptoms of a return of the tumor, about a year ago. Upon examining the laryngo-pharynx, I found a large mass extending from the base of the tongue downward to the arytenoid cartilage attached by a broad base to the right side of the pharynx and also attached to the right edge and anterior surface of the epiglottis. This tumor about 3-5 filled the laryngo-pharynx allowing me to see only about 3-5 of the epiglottis and of the lower portion of the larynx. The tumor was smooth in appearance, sessile, appearing to have no pedunculation, although the lower part looked as though it might possibly be engaged in a snare. The tumor appeared to be at least 5 c.m. in length and to stand out from the wall of the pharynx about 2.8 c.m. and to measure from before backward about 3.5 c.m. It was so soft to the touch that I suspected it was filled with fluid and I was inclined to believe that I had to deal with a branchial cyst. The next day I attempted to aspirate the tumor, but was unable to do so and was obliged to get a special instrument made for the purpose. On November 8th, I succeeded in getting a long strong bent needle which I attached to my aspirator syringe, with which I punctured the tumor in two or three places, but I found that it had no fluid contents. However, it receded so before the pressure of the aspirator needle that I could not yet believe that it was a solid growth. I finally anaesthetized the parts

with a strong solution of cocaine and with an unusually heavy snare armed with No. 8 piano wire, I succeeded in catching the greater part of the growth in the loop, but as the snare was tightened, at least one-half of the tumor at the upper part slipped out of the snare so that I could only hold the lower part of it which after it had been cut off, measured 3.8 c.m. in its largest diameter and about 2.8 c.m. in its smallest diameter. I tightened the loop on this portion of the tumor gradually and instructed the patient to draw in a very deep breath just before I finally cut the tumor off, then as the wire had nearly cut this through, I had the patient hold his breath and pulled upward on the tumor as the piece was cut off, and brought out of the mouth. In case this piece had fallen so as to obstruct the larynx, the air in the chest would have enabled the patient to cough it out. Immediately after removing this mass the patient said that he was choking and I saw that he was unable to get his breath. He quickly became cyanotic and soon stopped breathing entirely. One of my assistants rushed for an O'Dwyer tube which I did not have time to use and I seized a large Schroetter dilator and attempted to pass it into the larynx but did not succeed as the muscles were becoming so rigid that the patient's teeth shut down firmly upon my finger and I had to get the instrument and finger out as quickly as possible. By this time the man had fallen upon the floor in a narrow space and most awkward position, but seeing that death was imminent without a seconds delay, I called for a knife, which one of my assistants handed me, and I made a rapid low tracheotomy. I succeeded with the second cut in opening the trachea and then passed my finger into the opening and by it directed in the Schroetter tube which I had just used in the trial to enter the larynx; this took only 3 or 4 seconds. There was a large flow of venous blood, but turning the patient upon his side I succeeded in preventing most of this from going into the trachea and the Schroetter tube so nearly closed the opening • that there was not much subsequent danger. We set up artificial respiration as well as we could in the awkward position, being unable to manipulate only one of the patient's arms, because it was necessary for him to lie upon the side. In the course of 10 or 15 minutes, we were rewarded by having fairly good respiration and we felt that the patient was out of immediate danger. Subsequently with the patient still upon the floor, I grasped such bleeding points as I could discover with haemostats and later tied several of them. Finally after about an hour the patient seemed well enough to sit up and as there was no bleeding I introduced a hard rubber tube which was the largest tracheotomy tube I could find in two of the large instrument houses in the city, but it was too small; however, it had to answer the purpose. I then examined the larynx but was unable to get a good view, because of the blood and mucous in the mouth though there appeared to be a mass of the tumor lying in the lower portion of the laryngo-pharynx. Presently I found that blood was trickling down from the lower portion of

the wound in the neck and I then placed the patient upon a table and sought further for the bleeding points. I discovered that the isthmus of the thyroid had been partly cut away in the hasty operation and I was obliged to secure all the bleeding points by suture and ligatures. At the end of about two hours after the unfortunate accident the bleeding had been thoroughly controlled and the patient was fairly comfortable, though necessarily much weakened, the pulse being 140. Another examination of the throat failed to give any more satisfactory view than the one previously. I found that the patient breathed fairly well through the tracheotomy tube and sent him to the Presbyterian Hospital giving directions that the tube should be cleaned every hour or the inner tube be left out if necessary. The patient was to be kept in a room with a temperature of 80° F. and a moist atmosphere. These directions were carried out but the next morning the nurse in attempting to clean the inner tube placed it in hot water and it straightened out so that we were not able to use it again. The patient was unable to breathe through the larynx and could not swallow because of some obstruction in the laryngopharynx. An inspection showed what appeared to be a portion of the tumor filling the laryngopharynx and completely closing the larynx, but the neck was so sore and the patient so weak that nothing was done for its removal until several days afterward. For 36 hours after the tracheotomy he was fed by nutritive enemata; then a stomach tube was introduced without great difficulty and subsequently he was fed in this way until the obstructing mass was removed. During the first few days he had a temperature running from 101° to as high as 104° with considerable inflammation in the neck. Finally when this had subsided and the patient had gained strength so that he could sit up without fatigue, I anaesthetized the throat with a 20% solution of cocaine; then guided by a throat mirror I grasped the tumor with a vulsellum forcep that I had made from a uterine forcep and I passed down over it the loop of a No. 8 steel wire with which I had armed a strong snare. I engaged a considerable mass of the tumor and soon cut it off without difficulty. It measured $3\frac{1}{4}$ c.m. by $3\frac{3}{8}$ c.m. and 2 c.m. in its various diameters. I then found that although the laryngo-pharynx was free, the larynx was still partially obstructed by another small portion of the tumor which I removed in a similar way. This piece was about 1-6 the size of the one that I had just removed. The laryngopharynx and larynx were then perfectly free so that there was no interference with respiration or deglutition, but there still remained quite a large mass of the tumor on the right side of the pharynx beginning about half an inch below the level of the base of the tongue. This appeared to measure from 2 c.m. to $3\frac{3}{8}$ c.m. in its various diameters. I attempted to catch it with the loop but there was no place where the wire would hold. I attempted also to catch it with cutting forceps, but in this I was equally unsuccessful as the growth would crowd away from the instrument and no part of it could be

seized. Finding it impossible to secure it in any way, I determined that the best thing for the patient would be to have it removed through an external incision and I so advised; however, he declined further operation and on the 23d of November I removed the trachea tube and a couple of days later allowed the patient to go to his home. I was at a great loss to understand why there should have been the sudden choking after the removal of the first piece of the growth but after inspecting the throat I was led to believe that it was due to a part of the very movable tumor having fallen through the opening made in the mucous membrane by the removal of the first mass. The examination of the last portion of the tumor removed showed that it did not have a mucous covering and confirmed my view of the cause of the accident. Although such an accident as this from a portion of the tumor falling through an opening made by removing a part of it, could not occur excepting in extremely rare instances, this case illustrates the necessity of being prepared for emergencies when operating in the throat. The plan suggested of having the lungs filled with air and the patient holding the breath is generally efficient; the Schroetter dilating tube is also very valuable as a means of preventing strangulation, but in addition, assistants and the instruments for a quick tracheotomy should be at hand.

The three different pieces removed were examined microscopically and Dr. Peter Bassoe, pathologist at the Presbyterian Hospital, furnishes the following pathological report:

2d piece removed weighed 6 grams. Measured 3.8 by 3 by 1.5 c.m. The attached surface measures $3.2\frac{1}{2}$ c.m. most circular, of whitish color. The remainder of the surface is covered by a thin fibrous capsule and is grey in color. At one point a fibrous tag 8 m.m. long projects 3 m.m. from surface. Consistency, soft and spongy. Cut surface, whitish color with yellow tinge. Little blood is seen except close to surface. Smaller piece, weight 1.5 grams. Tissue resembles first.

Microscopic: The fibrous capsule is seen to be very thin. The tumor is seen to be composed of intermingled adipose tissue and fibrous connective tissue in about equal proportions. The fibrous tissue is rich in cells, most of which are of the fibro blast type but there are also many small inflammatory mononuclear cells and in places considerable number of polymorphonuclear cells. Blood vessels are rather abundant in the fibrous tissue and contain many polymorphonuclear cells. Their endothelial cells are large and rich in chromatin.

Diagnosis: Fibrolipoma with inflammation.

I am much indebted for efficient assistance during or subsequent to the hasty tracheotomy to Drs. J. C. Dill, J. Z. Bergeron, N. P. Colwell, S. A. Friedberg, E. L. Kenyon and J. F. Waugh. Dr. C. McDonald took care of the patient at the Hospital and aided Dr. Peter Bassoe in the microscopic examination.

34 Washington St.

Discussion.

Dr. William E. Casselberry: I think one of the most important phases of this paper is the point raised as to the proper procedure to remedy such an accidental sudden asphyxia.

I have several times found it necessary to make a hasty tracheotomy on patients who were already moribund, and in perhaps four or five such cases that I now recall I made the same operation that Dr. Ingals describes a hasty low tracheotomy and encountered the same inconveniences and dangers incident to haste in opening the trachea at that depth. I made such hasty low tracheotomies simply because I felt most familiar with that route, having practiced it in other more deliberate cases, and hence being less familiar with the route of high tracheotomy.

The liability to cicatricial stenosis is a valid objection to high tracheotomy and larygectomy when the tube must be retained in position for a prolonged period, and yet this would not pertain to emergency cases in which it is evident the tube would be needed but a short time. The classical high tracheotomy embraces the region of the thyroid isthmus which cannot always be readily "pushed down," and is liable to require a more careful dissection to avoid hemorrhage than even low tracheotomy. But for emergency cases it would seem that there is sufficient space between and embracing the crico-thyroid membrane down to, but excluding the thyroid isthmus. The books, especially of certain surgical works, commend this route for a hasty opening, "even with a penknife," and state that the crico-thyroid artery is usually too insignificant to be troublesome, and can be avoided by entering the scalpel edge downward; yet I have not known this route to be used, and as before said, I have not myself practiced it, and my objects in discussing it is to elicit from Dr. Ingals, in closing the discussion, just why he selected low tracheotomy in an emergency in preference to a higher laryngo-tracheotomy in his case, and to get his views as to the feasibility of the higher operation in such emergency cases, in view of the difficulties he described in his hasty entrance of the trachea at the deeper situation.

Dr. Otto T. Freer: There is one objection to perforating the crico-thyroid membrane in the performance of rapid tracheotomy, and that is the presence of the crico-thyroid artery which crosses the upper part of this membrane and is a vessel large enough not to be insignificant.

Whether one may make a high emergency tracheotomy without severe hemorrhage or not is large determined by the position of the isthmus of the thyroid gland. If this be situated high up so that it covers the upper rings of the trachea, as far as the lower border of the cricoid cartilage, it is not possible to make the opening through these rings in rapid tracheotomy without serious hemorrhage, especially as the superior thyroid arteries usually form an anastomosing loop across the upper border

of the isthmus. The presence of a central thyroid lobe, which may extend upward high enough to cover the cricoid and the thyroid cartilages, makes not only a high tracheotomy impossible but also excludes either cricotomy or the making of an opening through the thyrohyoid membrane as permissible procedures.

For emergency operations where no central lobe of the thyroid gland is in the way, the best operation seems to me to be the division of the cricoid cartilage with nicking of the thyrohyoid membrane above it, for in this region no vessels will be encountered so that there is no bleeding to prevent the immediate holding open of the cricoid ring with retractors. The cricoid cartilage is also the most readily palpable portion of the air passages in the neck, with the exception of the thyroid cartilages, and the operator has no difficulty in immediately finding it. Of course where an obstruction is situated in the upper trachea and lower part of the larynx the division of the cricoid ring is useless and a low tracheotomy is the only resource left.

Dr. J. Holinger: The troubles Dr. Ingals met with may be avoided by the operation that Kocher devised some time ago for the removal of growth from the pharynx and upper larynx. It consists in a transverse cut just below the hyoid bone, and by avoiding large blood vessels, causes very little hemorrhage. It makes the field of operation very accessible.

Dr. Ingals (closing the discussion): In reply to Dr. Casselberry, I selected low tracheotomy was because I had fear of cutting the isthmus, an accident to which Dr. Freer referred, and I could feel the trachea easily. I have done quick tracheotomy several times, but never one with the extreme haste which was necessary in this case. I have felt for many years that if I had to do a quick tracheotomy, I would catch the trachea with a tenaculum, and then I would be in a position to draw it up and divide the rings with a good deal of accuracy, but I did not have time to get a tenaculum in this case.

Dr. Norval H. Pierce exhibited Killian's latest models for esophagostomy, laryngostomy, tracheostomy and bronchostomy, together with a phantom for exercise in the foregoing procedures. He also showed instruments for submucous resection of the septum, frontal sinus surgery, and so forth.

CHICAGO NEUROLOGICAL SOCIETY.

The Chicago Neurological Society met November 17, 1904, with the president, Dr. Sidney Kuh, in the chair.

Probable Multiple Sclerosis, With Suspicious Family History.

History: This case was presented by Dr. L. Harrison Mettler. The patient was 32 years of age, married ten years, and had had two children, both well. The wife had been perfectly well. There was no neuropathic history except as follows: the paternal grandparents were

first cousins; the paternal uncle, aunt and the patient's father were congenital deaf mutes; the patient's mother was rendered a deaf mute in childhood from scarlet fever, and he himself was the weaker of twins. He had the childhood diseases without sequelae, and denied specific infection, living an even and moderate life, and was perfectly well up to the time of his marriage.

Eight years ago he first noticed the beginning of his trouble, when he was taken with a relatively sudden numbness in one hand, and later on, in the leg of the same side. He dragged his numb foot for quite a time. Patient subsequently had two attacks of numbness, paresis, weakness and dragging of his foot, and his condition grew worse each time. His wife described his speech as difficult and delayed, "as though he had his mouth full, and jerky." Dr. Mettler said he did not show much of that. No head ache, no pains, no sensory symptoms, no bladder trouble. A year ago last August he had a third similar attack. The patient's eyesight had been unaffected until recently. There was some slight paleness of the disc in July. The mental condition was stated to be of the markedly depressed, melancholic type.

Dr. Chas. Mix said that the patient showed a palsy of the left internal rectus, a little adduction of the foot, hardly a bit of paresis but much spasticity, and that his extensors were stronger than his flexors. The right pupil was suspicious. These irregularities were important points in establishing a diagnosis. Dr. Mix added that of the four cardinal symptoms of disseminated sclerosis, three were out at present, and asked if there was any possibility of optic neuritis or optic atrophy.

Dr. Chas. Lodor raised the question of the condition of the vascular system, and said that the heart skipped every third or fourth beat, that there was a murmur heard at the apex of the heart and a decided aortic click. The radial artery on the right side was certainly very much harder than 32 years, and that there was a marked sclerosis, such as is seen in the secondary stages of syphilitic trouble.

Dr. Harold N. Moyer thought the diagnosis of multiple sclerosis presented the highest possibility, though the case was not typical. He further said that the disseminated sclerosis do present some of the most extraordinary and bizarre pictures at times, and a great many things pointed to that diagnosis in the case presented. One point was his mental and emotional state. Nothing clearly excluded multiple sclerosis. That he had combined degeneration, the history, the progress and the clinical picture made evident, and for reasons stated, Dr. Moyer believed multiple sclerosis was the far more probable lesion. Its distribution in any given case determined the symptoms largely, and diagnosis was often not possible for years after the commencement of the disease.

Dr. Sydney Kuh said that it seemed to him that the diagnosis lay between two things: Either a disseminated sclerosis or else syphilis of the central nervous system, and while all

the symptoms might occur in both these, they would be more liable in syphilis than in disseminated sclerosis. The condition of the pupils would be more liable to occur in sclerosis. This patient had an irregular pupil. The early occurrence of sensory disturbance, the early appearance of bladder symptoms, the contrast between the very slight rigidity and the spastic gait suggested the possibility of syphilis. There could be no possible harm in gentle, moderate antisyphilitic treatment, and there might be good come of it.

Dr. Specht replied that this had been done six years ago and carried on for months. The patient had had potassium iodide, 10-15 grains, three times a day for months, followed by the iodide of mercury, a considerable dose, for some time. He seemed to get better at times, but the gain apparently could not be attributed to the remedies.

Dr. Mettler brought up the question as to whether any reliance might be placed upon the family history, and whether it might be a factor in producing the patient's present condition. It seemed so to him. There was a degenerative condition running through the family, or at least, there were defectives. Dr. Mettler did not think he had syphilis, and closed the discussion by saying that he was especially interested in the pathological side. It has been laid down that multiple sclerosis is absolutely non-hereditary, yet a few cases have been reported where mother and daughter had multiple sclerosis, and a number have been reported where heredity played a striking role, bringing the disease in the class of degenerative troubles, and some have thought that there were two conditions, and one of these a family type. Five cases were reported in one family. Taking everything into consideration, Dr. Mettler thought that if the diagnosis be correct, there may be something in heredity that might change the hard and fast rule enunciated.

Progressive Bulbar Palsy, with Beginning Amyotrophic Lateral Sclerosis: This case was presented by Dr. Julius Grinker, who said that the patient was 58 years old and had not been able to speak for some time, though his intelligence was good. Some time after the dysarthria had appeared, the man had experienced difficulty in swallowing, particularly liquids. This condition had been growing worse, so that life was maintained by ingesting small quantities of food at short intervals. The patient had frequently to assist the bolus of food with the finger or spoon towards or into the pharynx. Choking spells were not unusual with him. Of late, he complained that his head had become so weak that he was compelled to hold it up with his right hand to keep it from falling forward.

The patient was an old man of medium height, with head resting upon his sternum and chin somewhat inclined toward the right. Saliva constantly dribbled from his mouth and could be seen in streaks upon his clothing. The mouth appeared as a large transverse fissure, devoid of expression, and in marked contrast with the upper portion of the face, which showed numerous wrinkles. The tongue lay

passively on the floor of the mouth and could not be protruded. It was corrugated, somewhat atrophied and of a peculiar velvety feel. He was not able, with any amount of exertion, to touch his cheek with his tongue, but could barely lift it from the floor and place it above his lower teeth. For practical purposes, the tongue was motionless. The lips were rather thin and flabby and stood wide apart. A request to pout his lips as in kissing or whistling, elicited no response. Upon requesting him to say "Ah," the pillars of the fauces seemed inactive, but upon tickling his uvula there was some response, and a reflex obtained on tickling his fauces. A laryngoscopic examination discovered the vocal cord in the cadaveric position. The muscles of mastication appeared weak, the right sterno-mastoid atrophied and left almost entirely disappeared. The extensors sustained the entire weight of the head. The special senses were uninvolved, and there was no sensory disturbance of any kind. The deep reflexes of the upper and lower extremities were markedly exaggerated. Upon tapping the chin, a jaw clonus was elicited, which was better felt than seen. There was well-marked generalized atrophy of the upper extremities. The shoulder muscles were weak, and there was a cervico-dorsal kyphosis. Unaided, the patient could not succeed in undressing himself. The thenar eminence of the left hand was markedly flattened, as well as the palm of that hand, while the right hand showed a similar atrophy in the hypothenar eminence. There was an extensive scar on the left hand, the result of an injury received several years ago, which he claimed to be responsible for the weakness of that hand. A dynamometer registered 60 in the left hand and but 20 in the right. Besides the sterno-mastoid muscles, the trapezii were atrophied in the upper portion; the deltoids, the biceps and triceps, the left supraspinatus, the right infraspinatus and the right pectoral were all more or less atrophied. The gait was about normal, but the left foot occasionally scraped the floor. Some stiffness in the left ankle joint was claimed to be the result of rheumatism, which would probably account for this scraping. The Babinski phenomenon could not be obtained, and no appreciable diminution of strength could be detected in the lower extremities. Fibrillary tremor in shoulder and arm muscles could occasionally be seen. There was no reaction of degeneration, but a decided quantitative reduction of both currents in tongue, lips and mastoid muscles. The pulse was 90 to the minute.

To summarize, Dr. Grinker said this was a slowly progressive bilateral affection of the motor nuclei in the medulla, involving principally the hypoglossal, spinal accessory, glossopharyngeal, lower facial and probably some portion of the trigeminus and vagus. He said that an interesting question arises as to whether this be the disease described by Duchenne as glosso-labio-laryngeal paralysis, commonly called progressive bulbar palsy, as a distinct entity; or, was the symptom-complex, progressive bulbar palsy, but the beginning or end of some other

disease. Progressive muscular atrophy, pseudo-bulbar palsy, apoplectic bulbar palsy and amyotrophic lateral sclerosis were to be considered. Against progressive muscular atrophy would be the presence of exaggerated reflexes everywhere, and the absence of the reaction of degeneration in the paretic muscles. Apoplectic bulbar palsy has a sudden onset and inclines toward a hemiplegic distribution. Pseudo-bulbar palsy might produce exaggerated reflexes and a picture resembling the case presented, but there was no history of two different attacks, and the bulbar palsy was complete, while in the pseudo-bulbar variety the palsy is never complete, and some disturbance of the intelligence is the rule. Pontine tumor could also be excluded on account of the absence of tumor symptoms. In amyotrophic lateral sclerosis there is involvement of both the central and peripheral neuron, either in the cord or in the medulla, or in both. Though it usually begins in the cervical cord and later extends upward, it may begin in the medulla and extend downward.

In the case presented there was masseter clonus, exaggerated reflexes and weakness of muscles in the upper extremities and shoulder girdle, the paretic muscles reacting to both currents fairly well. This would indicate that the central portion of the nuclear representation in the medulla must be involved in addition to the nuclei themselves, as well as the pyramidal tracts and their continuation in the anterior cornual cells. The diagnosis of amyotrophic lateral sclerosis with a bulbar beginning, appealed to Dr. Grinker as the most logical, although the amyotrophic lateral sclerosis was still in the developing stage.

Multiple Cerebral Gummata: Dr. James B. Robb showed sections of a brain containing multiple gummata, and reported the history of the case, saying that the patient, a laborer, had begun to show symptoms three weeks before death, and that his condition was attributed to a fall which had produced a slight scalp wound. Following the injury, the patient had complained of headache, talked irrationally, was unable to eat or sleep, was suspicious, imagined he was pursued, saw objects on the walls, talked to himself, walked unsteadily and vomited at times. The doctor said no history of previous illness nor of venereal infection was obtained.

Examination showed a heavily built, well developed young man, who walked to the hospital, but with an uncertain, staggering gait; excited and irrational, so that restraint was necessary. The temperature was subnormal, the pulse slow, 58, irregular in time and volume. Respirations were stertorous and irregular, approaching the Cheyne-Stokes type. The heart and lungs were normal. The abdomen showed no abnormalities, the liver and spleen not being palpable. There was a scar on the left side of the glans penis. No spasms or paralyses were observed in face or extremities. The cremasteric and plantar reflexes were obtained. The patellar reflexes were not obtained, probably on account of the difficulty arising from the patient being in constant motion. The posterior cervical and epitrochlear glands were not palpable.

No deviations nor nystagmus were observed in the eyes, but the right pupil was larger than the left. Examination of the fundus showed bilateral choked disc of extreme degree.

The patient sank into coma and died in less than 24 hours after entering the hospital. Permission to examine the chest and abdomen post mortem could not be obtained, but the brain was removed and revealed the following:

Marked congestion of all the vessels of the meninges; moderate dilation of the ventricles with a clear fluid. On the mesial surface of the left frontal lobe, 3 c.m. behind the frontal pole and 2-½ c.m. below the upper border, was a nodule measuring 1-½ c.m. along the mesial surface and 7 m.m. transversely. It is entirely in front of the corpus callosum, firm in consistency, of the same color as the white matter of the brain, apparently covered by pia, and everywhere displacing the cortex and separated from it. Eight c.m. in front of the left occipital pole on the inferior aspect of the lateral surface, was another globular subpial nodule, 1 c.m. in diameter, answering in all respects to a description of the first. Seven and a half c.m. in front of the occipital pole on section on its anterior aspect, 5 m.m. below the external surface, was a firm, grayish area, which extended 17 m.m. inwards and measured 13 m.m. from above downward. It was directly connected with the brain substance, but quite sharply circumscribed, and interrupts a sulcus which extends 5 m.m. inward from the inner portion of the nodule. The bottom of this sulcus was located 2 c.m. from the posterior horn of the lateral ventricle. This section was a vertical one made 7 m.m. behind the opening of the aqueduct of Sylvius into the 4th ventricle. Just below and external to this was a firm, globular subpial nodule 7 m.m. in diameter, resembling the first two above described. Sections before and behind that just described showed the greatest anterior posterior measurement of the largest tumor to be not more than 15 m.m. One section 7 c.m. behind the frontal pole, going through the anterior commissure, extending from the bottom of the Sylvian fissure upward and outward as far as the external capsule, showed a dark, grayish-white area, quite sharply outlined and soft, measuring 17 m.m. long and 4 m.m. broad, bordered above by the lenticular nucleus and below by the gray and white matter of the temporal lobe. Nothing was seen of this area 5 m.m. in front of or behind the section described.

Microscopic examination of the tumors showed typical syphilitic gummata with endarteritis and periarteritis of all the meningeal vessels adjacent to them. Several sections taken from various parts of the brain where no gross lesion existed, showed the presence of a universal endarteritis and periarteritis, both in meninges and cerebral cortex.

The case was of interest, **first**, on account of the classical symptom-complex of brain tumor, no one symptom except focal manifestations being absent; **second**, the pronounced character

of the symptoms and the rapid course as contrasted with the insignificant gross lesions, which might have conceivably been overlooked had the history been absent at post mortem; **third**, the fact that the man died of a curable disease, the diagnosis made by the physician in charge having been delirium tremens.

At the meeting of the Southwestern Section held at Grace Cafe, 540 West 63d St., Dec. 6, 1904, the following papers were read:

Infiltration Anaesthesia in General Surgery.

R. M. Parker, M. D.: Generally speaking, an ideal local anaesthetic is one which, while completely abolishing pain, will not interfere with the operator, compelling neither modification nor restriction of his procedure, and one which will not retard the process of healing nor leave any unpleasant after effects, local or general.

Koller's presentation of cocaine as a local anaesthetic opened a new field for experimentation, with the result that now we have a local anaesthetic closely approaching the ideal. So popular has this anaesthetic become in the European countries that there "the question today is not which is the safer anaesthetic, chloroform or ether, but in what cases can local anaesthesia be substituted for anaesthesia by inhalation." Schleich, the chief pioneer in local anaesthesia, claims that it suffices in performing 90% of all surgical operations. Matas, one of the few American surgeons who have adopted local anaesthesia extensively, makes the more conservative estimate of 50% to 60%.

There are three varieties of local anaesthesia: (1) The direct, secured by applying the anaesthetizing medium directly to the surface to be cut, e. g., the ethyl chloride spray to the skin or cocaine solution to the mucous membrane.

(2) Infiltration anaesthesia, which is produced by injecting a solution of the analgesic into the structures to be cut.

(3) Regional anaesthesia, caused by injecting the cocaine solution into or around the nerve trunks which supply sensory fibers to the field of operation. At the point of injection all stimuli traveling in the nerve toward the center are blocked, so that the area supplied by these nerves, distal to their points of injection, is anaesthetic.

Of the three methods of local anaesthesia the infiltration method has by far the broadest field of usefulness in general surgery. The other methods are, in certain operations, advantageously combined with infiltration anaesthesia.

The success of the infiltration method has been largely due to the discovery by Schleich that very weak solutions of cocaine when injected into the tissues by means of a hypodermic needle are capable of producing total anaesthesia of the structures thus infiltrated. As the result of his investigation Schleich was able to commend for infiltration anaesthesia

three solutions represented by the following formulae:

	Strong.	Med.	Weak.
	1	2	3
Cocaine Muriat. ....	.2	.1	.01
Morph. Muriat. ....	.025	.025	.005
Sod. Chlor. ....	.2	.2	.2
Aque Dist.	100.	100.	100.

He advised the strong solution for inflamed and other hyperesthetic tissues and the weakest where a large quantity of the fluid was to be used. In this way he calculated to make infiltration anaesthesia safe from cocaine poisonings.

The largest amount of cocaine which can be safely injected at one sitting has been given by conservative authorities as gr. $\frac{1}{4}$. Assuming gr. $\frac{1}{4}$ as the maximum dose, it will be seen that we are limited to the use of $\frac{3}{4}$ of the strong solution, $\frac{3}{4}$ of the medium, and $\frac{3}{4}$ of the weak. I have, however, seen these quantities exceeded many times without evil results. In one operation, a circumcision, in which from $\frac{3}{4}$ to $\frac{3}{4}$ of the strong solution representing gr. I to gr. iss of cocaine, were injected, the patient developed alarming symptoms. He recovered, however. The danger from cocaine poisoning in operating with infiltration anaesthesia has been greatly diminished by the use of various means to retard the circulation in the field of operation. The Esmarch constrictor, where its application was permissible, has served the purpose well. The ice bag has done the work, less perfectly, however. Better than either is the suprarenal extract, which is an ingredient of most of the infiltration fluids now in use. When injected into the tissues this drug produces, after five or ten minutes, an ischemia extending one-half to one inch beyond the infiltrated area. So nearly bloodless become the tissues that incision and dissection will be accompanied by scarcely any hemorrhage. This action of suprarenal extract insures safety from cocaine poisoning in several ways. Instead of being rapidly carried away by the circulation the infiltrated fluid remains for a long time where it is injected. Part of it escapes through the operating wound, while the remainder is so gradually absorbed that the system is unlikely to be overwhelmed by the drug.

It has also been suggested that the cocaine, while harbored by the tissue cells, has in part been rendered inert by the latter before its absorption into the circulation. Furthermore, the extract of the suprarenal bodies is a heart stimulant and hence a physiological antidote for cocaine poisoning. The power of the suprarenal extract of mitigating the poisonous action of cocaine in infiltration anaesthesia is well demonstrated by the experiments of Butler, who injected guinea pigs with eight to fifteen times the toxic dose of cocaine in a solution with adrenalin, without observing even serious symptoms.

Not only does suprarenal extract guard the system directly from cocaine poisoning, but indirectly it makes the accident less likely by reducing the amount of infiltration fluid required for prolonged operations. As one would expect

from its local action, suprarenal extract maintains the anaesthesia of the solution with which it is administered, for a long time. The effect of the original Schleich solution lasts but twenty to thirty minutes. With the addition of suprarenal extract the parts remain anaesthetic for at least $1\frac{1}{2}$ hours, hence, re-infiltration is not required even in the longer operations.

The suprarenal extract should be added to the infiltration fluid in the proportion of one to twenty or thirty thousand. In some cases a dilution of one to forty or fifty thousand suffices, while in others nothing weaker than one to forty or fifty thousand will be effective.

Although adrenalin is said to be harmless, I shall exercise caution in the use of the stronger solutions since observing its effect upon myself. After injecting less than $\frac{3}{4}$ of a one to five thousand solution, I experienced an unsteadiness in the use of my hands. I was soon seized with a feeling of faintness and anxiety accompanied by nausea, palpitation of the heart, and pain in the abdomen, and was obliged to lie down. The whole surface of the body became quite pale. The pulse was rapid, small and irregular. In about ten minutes the effect had passed so that I could resume my work.

Another modification of the Schleich solution calculated to contribute to its safety is the substitution of eucaine for cocaine. It is said to be three and three-fourths times less toxic than cocaine. In one of my experiments on a colleague I injected between $2\frac{1}{2}$ and 3 grains of eucaine without observing any systemic symptoms. In my experiments eucaine appeared to be just as effective as cocaine though it proved to be more irritating than the latter. More burning and smarting and more edema resulted as after effects.

The safety of infiltration anaesthesia can be still farther advanced by using the weakest cocaine or eucaine solution which proves effective. There is a wide difference of opinion in the profession as to the amount of analgesic necessary to make an infiltration fluid effective. Schleich and many others believe that the anaesthetic effect of his solution is due more to their physical action than to the paralysis of the sensory nerve endings caused by the cocaine. Schleich claims that a .2% salt solution is all that is needed for infiltration anaesthesia, but that a small percentage of cocaine is advisable in operating upon hypersensitive pathological tissues. In the experience of others, however, a small amount of cocaine has been indispensable to a satisfactory infiltration fluid.

To satisfy myself on this point I carried out a series of experiments in which I injected solutions of salt, eucaine, cocaine and water of different proportions into the skin on the anterior surface of my thighs. I used, to test the sensation of the skin, four ordinary sewing needles loaded with one to four split buckshot. These needles are designated one, two, three and four, in accordance with the number of shot each carries. Each needle was provided with a piece of thread six or eight inches long, passed through the eye for convenience in handling.

Testing the normal skin, I found it painfully sensitive in a slight degree after allowing the point of needle No. 1 to rest on it from two to five seconds. With No. 2 the pain was slight but prompt; with No. 3, moderate, and with No. 4 quite severe.

A .2% salt solution was first injected. It caused a small degree of smarting which amounted to acute pain when the solution was rapidly injected. The infiltrated area was not sensitive to needle No. 1, but pain was caused by 2, 3, and 4, but much less than on the normal skin. The injection of a normal salt solution was painless if done slowly. Though the infiltrated area was quite numb, each of the four needles produced some pain. Concentrated salt solutions, 2% or 3%, caused severe pain which lasted fully ten minutes. The degree of numbness which followed was about the same as that seen with normal salt solution. Severe pain followed the injection of distilled water into the skin and continued for about two minutes, when the skin was found to be absolutely anaesthetic and continued in this condition for twenty minutes.

This series of experiments, most of which I have repeated many times, has satisfied me that an analgesic drug is essential to a satisfactory infiltration fluid. It will be noted that distilled water was the only fluid capable of producing absolute anaesthesia but its injection is too painful to be practicable. These experiments also illustrate the fact that fluids, to permit of painless injection, must be isotonic with the fluids of the tissues into which they are injected, i. e., they must have the same specific gravity and the same freezing point as the tissue fluids, otherwise osmosis occurs leading to engorgement or depletion of the cells, in either case causing pain.

The injection of solutions containing .1% cocaine was followed by prompt and complete anaesthesia over the whole infiltrated area. It persisted for twenty to thirty minutes. I could see no advantage in stronger solutions. With solutions of cocaine weaker than .1% the infiltrated area was anaesthetic at some points but sensitive to pain at others and the anaesthesia was of short duration, ten minutes or less. Whether the infiltration fluid consisted of cocaine in distilled water or in normal salt solution made no difference in the promptness or the degree of anaesthesia, but following the use of all the solutions in which distilled water alone was used as a menstruum for the cocaine, there was considerable burning and smarting with the return of sensation. The weaker solutions of cocaine in distilled water caused more or less pain when injected, while the solutions containing .6% of salt were painless when injected slowly. The results were the same when eucaïne was substituted for cocaine. From these experiments it appears that infiltration fluids, to be practicable anaesthetics, must contain about .1% cocaine or eucaïne and .5% salt.

The solution which I have found most satisfactory for general use, and one which is in ac-

cordance with the above experiments, is composed of:

Cocaine Hydrochlorate or Eucaïne.....	.1
Sodii Chlorid. ....	.6
Suprarenal Extract (1-1000)	5 to 10.
Aquae dist. q. s. ad	100.

It is best to make the fluid at the time it is needed as the suprarenal extract is quite unstable, becoming inert after a few days. Cocaine is also destroyed in time but eucaïne will keep indefinitely. The salt, cocaine, and eucaïne can be purchased in the form of compressed tablets which are convenient for making an accurate solution. The extract of suprarenals is obtainable in solution of one to one thousand. It should be kept tightly corked in its original bottle and opened as seldom as possible, for it tends to degenerate when exposed to the air a few times. It is also sold in compressed tablet form, though I have had no experience with this preparation.

In making the solution the desired tablets are first added to distilled water in the proper proportions. The solution is then boiled until it is sterile. The loss by evaporation must be made up by adding sterile water. Eucaïne withstands boiling indefinitely and cocaine is more resistant to heat than has been generally supposed. I boiled a .1% solution for thirty minutes without apparently injuring its potency in the least. The suprarenal extract should be added after the fluid is cool. It imparts a delicate pink color to the solution after a few hours but this does not indicate that the fluid has spoiled.

The above formula represents a safe and efficient solution for infiltration anaesthesia and while 60 c.c. of this solution will suffice for the large majority of operations, I believe that the entire 100 c.c. can be safely used at one sitting even though cocaine is the analgesic ingredient.

However nearly perfect an infiltration fluid may be, its successful use demands considerable experience in the method of its administration. Faulty technique, I believe, has been responsible for the failure of many surgeons to appreciate fully the possibilities of local anaesthesia in general surgery.

The first requisite to a satisfactory infiltration is the proper syringe. A strong one of large size, holding at least 3ii, should be selected. As infiltration takes place under more or less pressure, a syringe with perfectly fitting parts is essential, so that there will be no leakage about the piston or joints. Personally I prefer the solid steel syringe. The needle should be long and of small calibre. Its point should have a short bevel. An apparatus resembling the Potain aspirator has been devised for convenience in injecting large quantities of fluid, but it is not necessary.

The patient should be prepared according to the requirements of the operation. A preliminary hypodermic of morphine given twenty or thirty minutes before the operation is desirable for nervous individuals. The patient is placed in the position most comfortable to himself and the surgeon. A drop of carbolic acid or the ethyl chloride spray on the site selected for the first

insertion of the needle has been advised, but is not often necessary as the pain is usually too slight to be complained of by the most sensitive patient. The needle point is first introduced into—not beneath the skin. Its insertion needs to be only far enough to cover the bevel on the point when a drop or two of fluid is injected. This is followed by a pale wheal which is totally anaesthetic. The tactile and the temperature senses are abolished as well as the sense of pain. Infiltration is now painlessly continued along the line of prospective incision as far as the needle will reach. The needle may also be directed into the deeper tissues if their infiltration is desired. It is then withdrawn and reinserted just within the farther margin of the anaesthetic wheal and the line of infiltration is extended as before until the required length is reached. The incision may immediately follow, as anaesthesia is complete as soon as the tissue is infiltrated. All the tissues to be cut or dissected must be tightly infiltrated because the anaesthesia does not extend beyond the limits of infiltration. As soon as the least pain is complained of, the knife should be laid aside and the syringe resumed until the infiltrated area is sufficiently extensive. Economy and effectiveness can be learned by practice only.

Special features must be added to the method described to meet the requirements of the particular operation in hand, and the other methods of local anaesthesia may be profitably used as auxiliaries to the infiltration method in certain cases, for example, in herniotomy, regional as well as infiltration anaesthesia may be called to our assistance, for the nerves supplying the field of operation are quite superficial. The same can be said of operations on the chest wall. In circumcision direct anaesthesia may be combined with infiltration, a 5% solution of cocaine is applied to the mucous membrane of the prepuce while the skin and deeper structures are anaesthetized by infiltration.

The technique of treating infected areas deserves special mention for one frequently fails here in the use of local anaesthesia on account of the hyperthesia of the tissues. Infiltration should take place very slowly, lest great pain be caused by pressure transmitted to adjacent unanaesthetized tissue. The knife with which the tissue is cut should be very sharp so that a light stroke will do the work with little pressure on underlying structures. Sometimes the tissues are so honey-combed by infection that infiltration is impossible. If an abscess is opened the contents should be removed and the cavity packed with a strip of gauze impregnated with a 5% solution. After a few minutes it may be removed when the walls can be satisfactorily curetted by lightly scraping with a sharp spoon.

In the hemorrhoid operations, the skin around the margin of the anus is first infiltrated. The needle is then passed upward closely outside of the rectum and the sphincters and all the perirectal tissues are thoroughly infiltrated. It will now be found possible to dilate the sphincters in the usual way without causing pain. The

mucous membrane can also be treated by direct anaesthesia if it is desired, but it is not often necessary. As each hemorrhoid is selected for removal, the needle is inserted at its base and the tumor is tightly infiltrated. It can now be removed by clamp and cautery, ligation or excision as the operator desires.

In skin grafting the area to be covered is first infiltrated if it is to be curetted. Then the area from which the grafts are to be taken is anaesthetized in the same way. The operation can then be carried out as it is with general anaesthesia. In a case which I operated on with Dr. Fowler, this method was used. Though the condition of the wound and the subsequent conduct of the patient were very unfavorable to healing, a large percentage of the grafts took, and the infiltration did not appear in the least to have damaged the grafts.

The technique of anaesthetizing in the many other minor operations which may be done with the aid of the infiltration method can not receive attention here.

In my work with infiltration anaesthesia I do not confine its use to those cases in which general anaesthesia would otherwise be used, but I employ it to relieve my patients of the small amount of pain in those slight operations which are usually done without any anaesthetic. The aspiration of the chest, for example, and the tapping of an ascites are rendered painless by first infiltrating the course of the needle or trochar. I have also used this method in about twenty-five vaccinations. Many patients submitting to re-vaccination have expressed their gratification at being spared the usual amount of pain, small though it is. Babies and children can be vaccinated with aid of the local anaesthetic without apparently realizing that anything unusual is happening. All the infiltration necessary for this purpose is enough fluid in the skin to raise a wheal the size of a navy bean.

Many of the major operations as well as the minor surgery can be done with local anaesthesia alone. It is especially indicated in such operations as prostatectomy and operations for exophthalmic goitre, in which the patients are usually poor subjects for anaesthesia by inhalation. Operations on bone can be carried out successfully, and even amputations of the extremities have been done with local anaesthesia alone. In such operations it is advisable first to expose the large nerve trunks of the extremity and block them by injecting within their sheaths a 2% or 3% cocaine solution. It is not sufficient simply to pass the needle through overlying structures and surround these nerves with the solution, as incomplete anaesthesia only can be thus obtained. Such a procedure will block the smaller nerves, like the intercostals, very effectually as is shown by the following experiment: A 2% eucaine solution was injected around the 5th, 6th and 7th intercostal nerves in the anterior axillary line. The needle was entered over the 6th rib and the corresponding nerve surrounded. It was then partially withdrawn until its point cleared the muscular fascia when needle and skin could be

shoved up to the 5th and down to the 7th intercostal nerves, which were treated like the 6th. At the end of ten minutes there was present a triangular area of absolute anaesthesia. Its base, in front and parallel with the anterior axillary line, reached from the under border of the 5th to the lower border of the 7th rib. Its apex rested at the lateral border of the sternum. This area, evidently, received innervation from the 5th, 6th and 7th intercostals only. Immediately above and below were areas of relative anaesthesia. In the area of absolute anaesthesia all the soft parts covering the ribs were insensitive to pain when perforated by a needle, but sharp pain was complained of when the periosteum was touched.

In laparotomy infiltration anaesthesia finds a broad field of usefulness although it has its limitations. Many abdominal operations can be executed from beginning to end with no other anaesthesia. In other cases the infiltration method must be supplemented by general anaesthesia. The separation of peritoneal adhesions usually demands anaesthesia by inhalation.

Certain structures in the abdomen are quite sensitive, others are not. The parietal peritoneum is always painful to incision or other operative measures, but the omentum may be ligated, divided, cauterized, or otherwise treated, provided it is not pulled upon. The intestines are not sensitive to pain unless their mesentery is forcibly stretched. Removal of the vermiform appendix is painless, and operations on the surface of the uterus are not complained of provided the ligaments are not made tense. In a general way it may be said that all pain felt within the abdomen during operation or disease is to be referred to those parts which are innervated by the intercostal, lumbar, or sacral nerves.

The painful structures contained in the abdomen give to local anaesthesia limitations rather than contra-indications. While local anaesthesia is especially desirable in cases of grave organic disease in which general anaesthesia is especially dangerous, it can be used in all operations up to a certain stage, thereby shortening the period of general anaesthesia and reducing to a minimum the danger of complications incident to chloroform and ether. The change from local anaesthesia to general is made practicable by the use of gas as a preliminary to ether and chloroform, as the loss of time is thereby obviated.

The absolute contra-indications to infiltration anaesthesia are as follows:

(1) Insurmountable fear on part of the patient. Even the most nervous patients can usually be quieted by assurance, however, and their confidence is soon gained after the operation is once under way and they find that they suffer no pain.

(2) Where muscular relaxation is required.

(3) In plastic operations where infiltration would destroy relations.

Among the objections which have been urged

against the infiltration method are the following:

(1) Danger of cocaine poisoning. Since the introduction of suprarenal extract and eucaine this objection no longer holds.

(2) Sloughing of the tissues following its use. Many cases have been reported by dentists. To what extent infection of the wound is responsible for the sloughing is an unsettled question. I have observed two cases but I cannot justly attribute them to action of the solution. One was a circumcision done on a subject suffering from chancroids; the other was the removal of a large callus resulting from pressure of an artificial limb. The surrounding tissue was of low vascularity. Infection occurred. It cannot be denied that there is danger of carrying infection from the skin into deeper tissues with the infiltrating needle.

(3) Secondary hemorrhage. This is due to a temporary constriction of the arteries in the field of operation, caused by the cocaine. During the operation no hemorrhage occurs but a paresis of the vessel wall soon follows when hemorrhage begins. I had this accident in a circumcision. The bleeding was from the dorsal artery of the penis. With eucaine or when suprarenal extract was used coordinately with cocaine, I have not seen this complication.

These objections are certainly more than offset by the advantages of infiltration anaesthesia, which are:

(1) Removal of danger of death on the table.

(2) Avoidance of the after effects of general anaesthesia on heart, liver, kidneys and lungs. Be it said, however, that according to statistics pneumonia occurs as frequently after one anaesthesia as the other.

(3) Absence of nausea, vomiting, and unconsciousness.

(4) Impossibility of drowning by fecal vomit.

(5) The patient is conscious and can be of assistance to the surgeon.

(6) The consent of the patient to the operation is more easily obtained.

(7) The anaesthetic is more agreeable.

(8) A part or all of the assistants may be dispensed with.

Local Anaesthesia and Anaesthetics Outside of the Infiltration Method.

Dr. Ransmeier: Before I begin my paper proper I wish to state that I have tried to make it as short as was consistent with common sense and have tried to keep from the field covered by Dr. Parker's paper as much as possible.

I am indebted very much for material obtained from various standard works, especially to that of Heinrich Hare and others.

This is a subject which interests every live practitioner, whether he is a surgeon specialist or not.

Though the agents consistently and continually used are limited in number and these are not always satisfactory, still the benefit derived

from their use is very great. You cannot appreciate the gratitude felt for the help derived from the use of these agents till you have been surgeon and patient.

At the outset I wish to say that I intend to deal especially with local anaesthetics, proper, not local anodynes, the latter being of use where pain is already present, not anaesthetics properly speaking.

A local anaesthetic is employed to abolish the sensibility, by topical application for periods varying from a few seconds to perhaps a few hours.

As examples of local anaesthetics, we have cocaine, carbolic acid and extreme cold.

As examples of local anodynes, we have aconite, carbolic acid, chloral, menthol, veratrine, etc. A local anaesthetic not only serves the operator but also the therapist and the diagnostician.

From time to time some zealous worker brings to our attention some new agent, which he has brought from the land of the unknown but because of properties lacking (or present) many of these are accepted by only a few, and in time are very often abandoned by most of these and even by the discoverer himself.

To be satisfactory a local anaesthetic for operations should:

(1) Abolish the sensibility of a part thoroughly.

(2) Should not effect the field of operation sufficiently to interfere with well laid plans of operation.

(3) Should be fairly free from dangerous or even unpleasant effects before, during and after an operation.

(4) Should not retard the healing of wounds, or hurt the general health of the patient.

In regard to the choice of a local or general anaesthetic:

It may be preferable to use a local anaesthetic:

(1) To save time before, during and after an operation.

(2) If you can properly perform an operation with it, in short operation, in simple operation, in operations well known, e. g., minor operation, such as:

(a) Tracheotomy, for laryngeal diphtheria. Here chloroform would be bad as causing additional prostration. Some use it even in strangulated hernia operations.

(3) To save assistants, where necessary, where it is impossible to get a good anaesthetizer or any one, or to pay one.

(4) It may save some added responsibility due to giving a general anaesthetic.

(5) To avoid unpleasant after effects, e. g., headache, retching, vomiting, especially bad in operation about mouth, eyes, face, throat, abdominal wall.

(6) To avoid dangers to kidneys and lungs, paralysis, etc.

(7) To avoid shock, which is often due to a general anaesthetic.

(8) To avoid fear of being put to sleep, that of helping to gain permission to an early op-

eration and thus prevent pathologic processes from taking place.

(9) In operations about face, etc., to prevent assistants from interfering with operator.

(10) To allow coughing and thus preventing deglutition and aspiration of blood, etc.

(11) To have general cooperation of patient allowing him to cough, turn eyes or head, expectorate, move members after tenotomies for tests, etc.

Use a general anaesthetic:

(1) If patient has horror of sight of instruments and blood, or if he prefers to be asleep, if there is necessity for exposure.

(2) If patient asks for a general anaesthetic.

(3) If patient is hysterical.

(4) If consciousness may lead to shock or great fright.

(5) If uncertain how much ground your operation will cover.

(6) If complete muscular relaxation is necessary.

(7) If the pain due to application of a local anaesthetic is too severe before, during or after the operation.

(8) If the application of a local anaesthetic interferes with the field of operation impairing vitality of tissues, etc.

(9) If operation is prolonged, or if field is extensive.

I wish to give a brief outline or plan of my paper here. The agents which I have taken up are:

Of cocaine, I shall consider:

(1) Cocaine.

(1) Properties, in ophthalmology, laryngology and rhinology, otology, genito-urinary surgery, general surgery.

(2) As an aid to diagnosis.

(3) As a therapeutic agent.

(4) Methods of use.

(5) Accidents and their remedies.

(2) Tropa-cocaine hydrochloride.

(3) Holocain.

(4) Orthoform.

(5) Refrigeration.

(6) Eucaïne, H. & B.

(7) Nirvanine.

(8) Aneson.

(9) Liquid air.

(10) Chloretone.

(11) Guaiacol.

(12) Carbolic acid.

(13) Antipyrin.

I will not spend much time upon those agents which are as yet not satisfactory, as I believe we can derive a greater benefit from a study of those which we know are reliable.

Let us briefly consider **Aneson**:

Aneson is a trade name for acetone chloroform, while it has sufficient anaesthetic power for some operations it is not used extensively.

It is used some in ophthalmology, where it is proper to state that it does not effect the iris, nor cause irritation of eye or after pain.

It is also used in nasal, laryngeal, dental and minor general surgery in 1 or 2% solutions.

Sternberge says, It is nontoxic, non irritant and anaesthetizes quicker than cocaine.

Liquid Air recommended by Campbell for purposes of local anaesthesia, as well as for a cauterizing agent in certain local conditions. The reaction from freezing takes place in about 20 minutes and is attended by hyperemia. A spray of liquid air gives relief in intestinal, trifacial and sciatic neuralgias.

Patton states that you can abort boils, carbuncles and buboes in their early stages, if you thoroughly freeze them and specific, chancroidal and varicole ulcers heal promptly if treated twice a week by freezing.

Chloretone given in 10 to 20 grain doses or used in solution. Closely allied to chloral, yet does not depress heart or respiration in moderate doses, nor does it irritate the stomach which makes it useful for sedative purposes in gastric carcinoma and in vomiting, due to irritation. Personally I have used it repeatedly for anaesthetic purposes upon mucous membrane of nose and throat, but have had little satisfaction from its use.

However, I have noted that certain men who are authorities say it is well to combine it with cocaine, claiming that less cocaine is needed and thus proving an advantage.

Tropo Cocaine Hydrochloride, an alkaloid obtained from the small leaved Java Coca plant. Readily soluble in water.

Ferninande and Chadbourne say that a 2 or 3% solution produces a quicker, more reliable and less toxic anaesthesia than cocaine.

Antipyrin. Very soluble in water. It is valuable to produce anaesthesia locally in bladder irritations, tending to depress the sensory nerves and centers of reception of the cord. Therefore in medicinal amounts a nervous sedative. If you apply it to mucous membranes or inject it beneath the skin, it has a powerful local anaesthetic effect. This may last some days. Its field of usefulness lies in therapeutics, mostly however.

In suppository it may be employed to relieve rectal pain. It is of service also when incorporated in dusting powders, for painful ulcers and like conditions.

Carbolic Acid. Care must be used in the use of this agent. Though its effects locally are only superficial, for the coagulation of albumen it can't penetrate very deeply. Depressing sensory nerves, it may be employed in 1 or 2 drop doses for nervous vomiting and gastric irritation. 1 part to 100 of water, relieves an inflammation of an ulcerated sore throat, may be gargled or applied by means of a swab. For burns, it makes a good dressing when combined with sweet oil, 1 in 50. For itching due to jaundice it may also be combined with sweet oil and used with advantage, 10 gr. to 3iv of the oil. It is also applied in the form of an ointment in subacute eczema.

Guiacol, contains 60 to 90% creosote, and is not very satisfactory. Its application at first smarts and pains and may cause a slough of tissue. It has caused general depression. Anaesthesia is not very lasting. It is sometimes painted over neuralgic areas and has been injected into painful deep seated nerves.

Nirvanine occurs in white crystals, very solu-

ble in water about 1-10 as toxic as cocaine. Has little effect on heart and respiration, hence it is a valuable agent for use about places where you cannot control the circulation easily, e. g., about rectum. It is a staple compound and can be boiled without injury. As it is irritating to the conjunctiva it is not so valuable in eye work though its anesthesia is fairly prompt and lasting. It has no effect on the unbroken skin. If deep anaesthesia, even on mucous membrane operations, is desired, don't use it as it is not satisfactory. It is best adapted for subcutaneous and infiltration work. Oft employed by dentists previous to extractions.

Holocaine. The hydrochloride is generally employed in 1 or 2% solution. It is slightly soluble in cold water. It may be boiled. Heinick's work states that it should be kept in a porcelain vessel, for if placed in a glass vessel, containing an alkali in its makeup it will extract the alkali and become cloudy. Renew your solution after a couple of months. It is best not to use it subcutaneously but to limit its use to mucous membrane. When there is not much danger attending. It is several times more toxic than cocaine. It may be employed and still get results on normal, hyperemic and granular conjunctivas. Its action is rapid. Not effecting, cauterizations it may well be employed. Wounds turbing intraocular tensions it is valuable for use as an anaesthetic upon glaucomatous eyes. It does not contract the blood vessels and while it may therefore be the cause of obscuring your field, it washes out the field. It does not dry the epithelium of the cornea, nor hinder lachrymation. For the pain of corneal ulcerations, or cauterizations it may well be employed. Wounds have a better chance to heal well after its use than if an anaesthetic were employed that shut off the circulation.

Orthoform. A colorless, odorless powder, only slightly soluble in water, hence not adapted for hypodermic use. It can be suspended in oil. It is mostly employed in a therapeutic manner. If applied too thickly and too long on weakened skin, it may cause an eczematous rash. This may happen on the skin about an ulcer upon which orthoform is used. This complication may be avoided, by covering this area with a simple ointment. It has no action upon the unbroken healthy skin or even upon healthy mucous membranes.

It seems necessary to bring it into immediate contact with the terminal sensory nerve fibres. It is therefore useful in painful ulcerations and it can be advantageously combined with such agents as iodoform, aristol, calomel, boric acid, etc. The anaesthesia may last for hours or even days. You may employ it in solution in alcohol or collodion or in a 10 to 20% lanoline ointment.

(1) It has a soothing effect upon wounds produced by operations for adenoids, tonsils, cauterizations, etc.

(2) It is valuable for pain and difficulty of swallowing in cancer and tuberculosis of larynx and tongue, 5 gr. is enough to insufflate.

(3) Used on specific and chancroidal ulcers after cauterization. If there is much exudation, employ an ointment.

(4) Valuable in suppository for rectal ulceration and irritation.

(5) Also used for varicose ulcers.

(6) Internally you may employ it for cystic irrigations and for gastralgias you can give it in doses of from 7 to 10 grains.

(7) It is an excellent drug to add to dressings for burns, even if deep.

(8) The pain of bed sores, circumcisions, painful hemorrhoids and anal fissures, corneal ulcers, fissured nipples, cauterizations are benefited thereby, as it can be used with little danger, it is a very valuable remedy.

Heinricke says, two ounces a week were used on a cancer with no bad effects.

Anaesthesia by refriger., viz.: Ethyl. chloride, cold, ice, ice water, ice and salt. Evap., rhigoline, ether, etc.

Ethyl. Chloride. Most commonly employed. Comes in small glass cylinders, compressed into a liquid form. When held in the hand, the heat derived from the body expands it and forces the ethyl chloride through a capillary opening in the form of a gas which is directed upon the part for anaesthetization. Hold your tube 8 or 10 inches from your field, as it assumes a parchment appearance, it may then be incised. The anaesthesia lasts 2 or 3 minutes. I personally have found little satisfaction in its employment for various reasons. However, many favor its use. Its anesthesia is superficial and fleeting. It is expensive. You usually freeze a greater area than necessary. If you over freeze, the health of the tissues is impaired and the wounds will heal more slowly. Sloughing may even ensue. Its use is attended with pain. You should not employ it near a flame. It changes the aspect of your field. Because of the hardness of tissues caused by the freezing, your cutting instruments must be very sharp as any added pressure causes pain.

Some of the same objections may be offered to the use of ice or ice and salt.

Ice water injections in skin or in places like the rectum have been employed with some satisfaction.

Sprays of chloroform, ether, menthol variously combined, have also been used as local anesthetics. The effect lasts about 5 minutes. Don't use near eyes!

Eucaine A— $C_{19}H_{27}NO_4$

Eucaine B— $C_{19}H_{21}NO_2HCl$.

Eucaine A (alpha) has been used as a local anaesthetic but is now generally discarded, because of toxic properties, similar to strychnine.

Used in ophthalmology, it caused considerable burning. In nose and throat work 5 or 10% were used.

Eucaine B (beta) less irritating and less toxic. Introduced in '97. It is a very good anaesthetic, being less toxic than cocaine (though not free from toxic properties). This can be used in larger amounts. It is a colorless, crystalline powder quite soluble in water. Not decomposed by boiling. A valuable feature. It causes some irritation, especially in injections. It is very stable and can be kept a long while. It is well adapted for use on the eye, nose, throat, urethra, rectum, etc. Its anaesthesia is

more rapid than cocaine, though not so lasting. Used in nose and throat in 4 to 5%. Used in laryngeal tuberculosis 5%. Used in ophthalmic work 2 or 3%. Used in general surgery 2 to 5%. It is well employed in genito-urinary surgery, because you can inject fairly large amounts, as much as 3i or 3iiss of a 3% solution has been employed with no evil results. It is satisfactory for circumcisions, operations on buboes, hydroceles, passage of urethral sounds, catheters, cystoscopes, etc. If you desire to overcome local engorgement it is a good agent.

The last agent I wish to speak about is cocaine, the most commonly employed local anaesthetic agent of our day. The hydrochlorate is the favorite salt used. While death has been attributed because of its over use the same may be said of other agents and this will not cause us to abandon it in properly indicated places and in proper amounts. Because of its powerfully toxic properties it must be employed with caution. It is well to ascertain in every proposed operation where you desire to employ it, if there is any contraindication in the heart, brain, kidneys and lungs of the patient. If there is, probably some other local anaesthetic may be employed just as well.

We all know that it is an admirable anaesthetic for all kinds of mucous membranes be they those of the mouth, throat, nose, stomach, intestines, eye, labia, vagina, bladder or womb. The powder may be dusted on a part, or as is more customary, a solution may be swabbed upon, or injected into the part you desire to anaesthetize.

It paralyzes the terminations of the peripheral sensory nerves, and the less vascular the part the greater its action.

It is employed in strengths averaging from 1 to 3%, though 20% is sometimes used.

It can, of course, be sprayed and while this method is employed by many surgeons of unquestioned ability and knowledge, still it is only proper to warn those who have not had much experience in its use, to use extreme caution if employed in sprays, especially in the nose. In fact when possible, and it usually is, you had better apply it with swabs or pledgets.

In operations necessitating the section of the skin, it is not sufficient to apply it to the intact skin, but to anaesthetize the skin it must be injected into the skin itself, that is, it must be used endermically.

In General Surgery it is employed for all sorts of minor operations. If the skin is to be cut, inject the skin itself, along the line of proposed incision, making probably only 1 skin fracture, but changing the angle and direction of the needle. If necessary, then inject the subcutaneous tissues. It is employed in operations for the removal of small cysts, birth-marks, ulcers, tumors, ganglia. For tapping hydroceles, drainage of the abdomen and thoracic cavities, also for work on ischio rectal, perineal and other abscesses. Tracheotomies, tenotomies and many other similar operations may be performed, without pain to the patient.

In Ophthalmology, we find a great field for its use, as cocaine is not so irritating as many

other local anaesthetics possible here. It is generally employed in solution from 2 to 5% strength. Though this may vary from 1 to even 20%, where perhaps you may need it in enucleations, especially for the tissues surrounding the optic and ciliary nerves. According to White a 20% solution is sufficiently strong to allow cauterization of the corneal ulcer.

The removal of foreign bodies from the conjunctiva of cornea, iridectomies, cataract operations, enucleations, canal operations, removal of cysts, pterygia, etc., are all readily accomplished without pain by employing this valuable servant. A solution in passing through the cornea, may be carried to the aqueous humor and you can perform an iridectomy painlessly, if you wait 15 or 20 minutes for your anaesthesia to take place.

In general anaesthesia your patient may vomit, and this might result in a rapid discharge of the aqueous humor in operation for cataract. A prolapse of the iris and hemorrhages in eye ball might result. This might interfere with the vitreous and lens.

If a local anaesthetic agent is employed, your patient may aid you by changing the position of the eye ball if necessary.

Though the ophthalmologist is highly favored by cocaine the laryngologist and rhinologist is no less so. In his work, cocaine fills a very useful place.

As a conscious patient can cough, what an aid this alone is, to prevent asphyxia resulting from blood accumulation in the trachea and bronchi.

I again desire to denounce the spraying of cocaine, especially by the novice. You spray a greater area than necessary and therefore you intrude into the body organism toxic principles, which are unjustified, may cause much trouble and may result in death.

In this work, be clean as elsewhere. Clear your field with suitable sprays or swabs of mucous, saliva, crusts and other matters. Their presence diffuses your agent, retards its action and hinders their observation.

In tonsillotomies one or two thorough swabbings of a 5 to 10% solution to the mucous membrane over the proposed line of incision is all that is usually necessary, as the mucosa is the part that is most painful. However, some operators inject 1 and 2% solutions below the mucosa. 1 and 2% solutions are sufficient preparatory to cauterization of small veins, follicles, etc., the 5% is sometimes necessary for deep cauterization. You can shrink intumescent structures and thereby see objects posterior to a greater advantage, catheters and other instruments are more easily introduced and the wounding of tissues is often avoided. In some cases, you may by this aid, catheterize a eustachean tube that you could not otherwise perform.

In anaesthetizing the turbinated bodies, if you use pledgets, you should use enough of the solution to moisten them thoroughly, though not excessively and thus allow dripping. A good way is to moisten your plug, introduce it and instil your solution by means of a medicine

dropper a few drops at a time upon a protruding end. Your pledget must be in contact with your surface. Swabbing is well adapted also for this work. Before anaesthetizing always get a good idea of the conditions and appearance of your field first, cocaine may shrink intumescent structures and give you a false opinion, especially true in intumescent turbinates, and polypi., may be caused to disappear temporarily.

Use cocaine cautiously in the nose. In this kind of work the nasal cases cause most trouble, as absorption is rapid.

The addition of adrenal solution to your cocaine solution renders your operation more nearly free from blood.

In Otology. Heinick states that cocaine can be well employed:

(1) For small operations upon walls of auditory canal, or on auricle, e. g., abscesses, removal of small tumors, etc.

(2) It is also valuable to apply previous to painful applications, nitrate of silver, acids, etc.

(3) For scraping, ecrasement, torsion, etc., in the tympanic cavity it is a valuable agent.

(4) It is well adapted for anaesthesia in paracentesis of the tympanum.

(5) It is also used previous to cutting the handle of the mallens and tenotomy of the tensor muscle.

In Genito-Urinary Surgery we find it invaluable for circumcisions. It is helpful to soothe pain of chancroids and chancres before and after cauterization, as a dusting powder. It can be well employed in solution for the removal of tumors about penis, anus and vulva. Curettage of uterus has been successfully and painlessly done by its aid.

It is valuable in anaesthetizing sensitive vaginal and rectal mucous membrane walls, previous to examinations.

Internal urethrotomy can be done painlessly with its aid. Don't use over 2% in urethra.

In Diagnosis we can also employ cocaine to advantage. It is well to anaesthetize hypersensitive mucous membrane of throat and nose when you desire to examine the fauces and make posterior rhinoscopic and laryngeal examinations. The same is true for vaginal, rectal, urethral and ophthalmic examinations.

In Therapeutics.

(1) It is a great aid in securing comfort for the man with an anal fissure, especially for pain caused by bowel movements.

(2) It serves a useful purpose in relieving itching and pain of hemorrhoids.

(3) In pruritus, vulvar and preputial, you may also find it indicated.

(4) In certain eczemas, especially about the anus and genital organs also.

(5) It is employed, though perhaps not always wisely, in the vomiting of pregnancy, introduction of eustachian and urethral catheters, sounds, etc. In the introduction of stomach tube, for fissured nipples, painful pharyngeal and laryngeal conditions (especially tubercular and specific) and thus giving comfort and a chance to swallow, to relieve eye pains, especially those due to corneal irritation, gastralgia,

for gastric tabetic crises, in vaginismus, previous to cauterization, and by cataphoresis for neuritis.

As to the methods of using cocaine:

(1) In operations, be clean and in every detail have your asepsis and antiseptics equal to that required in general anaesthesia.

(2) Use pure cocaine products, impurities may make it more toxic, certainly less favorable.

(3) Use fresh solutions, they deteriorate, lose their power and may become septic.

(4) Use sterile water in their preparation.

Reclus says $\frac{1}{2}$ gr. is sufficient for small operations. He endeavors to limit it to 3 grs. or less for larger operations. Be on your guard in the latter case. Use your cocaine in divided amounts. Don't inject into the body at one time. It is better to use a relatively large amount of a weak solution rather than a small amount of a strong solution. He does not employ a solution stronger than 1% subcutaneously.

(5) Operate with patient in a recumbent position and thus limit your chances of getting syncope. It is well to keep them so for some time afterward.

(6) Be especially on your guard if you employ it about the nose, urethra, rectum, as your absorption is rapid and not easily controlled.

(7) Limit the drug to a certain field, and keep it there as long as you can, by using a tourniquet. This limits the amount of the agent that goes into the general circulation. This can be done in operations on extremities, scalp, penis, scrotum, etc.

(8) Expel blood from part, before application of tourniquet as much as you can.

(9) When through with your operation release the tourniquet only partly and temporarily; this admits the circulation in limited amounts or stages and thus prevents a too great an amount of the drug from being taken into the general system at once.

(10) The use of the tourniquet prevents your field of operation from being too bloody.

(11) Avoid injection into veins, mark them out if necessary before hand.

(12) Before you begin operations allow sufficient time to elapse for anaesthesia to take place.

(13) In skin incisions, inject the skin itself.

(14) Have no air in syringe.

(15) Warn patient, that he may have some pain.

(16) Plan out before hand what you would do in case of an accident—you may save a life.

(17) Know thoroughly: the signs of intoxication, are loquacity, shallow respiration, cold sweats, rapid feeble pulse, unconsciousness and convulsions.

(18) Have your remedies ready—death may result:

(1) By paralysis of respiratory centers.

(2) By fixation and rigidity of respiratory muscles.

For (1) amyl nitrite inhalations, or nitroglycerine hypodermically, strychnine sulphate 1-20, elevate feet, lower head, artificial respira-

tion, inject ether and aromatic spirits of ammonia.

For (2) chloral and bromides, can give per rectum, morphine, inhalation of amyl nitrite, also catheterize bladder.

At a meeting of the Douglas Park Branch, a paper was read on **Observations on Influenza Pneumonia.**

Dr. C. L. Hobbs: From a study of the bacteriology, pathology and clinical course of the pneumonias of influenza, the conclusion is inevitable that a sharp division exists between true influenza pneumonia, caused by the specific micro-organism of la grippe in pure culture, and those pneumonias due to the associated inflammatory action of the streptococcus, the diplococcus pneumonia, the staphylococcus and the pneumobacillus of Friedlander. The results of bacteriological investigations have pointed out the tendency to co-operation among this group, and their inclination to be associated with the influenza bacillus, producing various clinical types of the disease. This being accepted, the diversity of opinion regarding the different forms of grippal pneumonia can be understood. One is a typical manifestation of influenzal infection, due to an extension of the primary specific inflammation along the bronchi to the air cells, while the other is from a bacteriological point of view, a complication. However, it would be unwise to attempt here too fine a distinction; the close analogy, pathologically and clinically, between all the types of bronchopneumonia found during an epidemic of grip, makes it possible, for the present at least, to accept the term "influenza pneumonia" in its broader sense. From croupous pneumonia, whether running a typical or an atypical course, complicating or following an attack of influenza, it stands out as an entirely separate and distinct disease.

The pathology of the Pfeiffer bacillus pneumonia is the pathology of a typical lobular pneumonia, i. e., an extension of the inflammatory process directly along the axis of the finer bronchi into the air vesicles. A cut surface of the lung shows disseminated areas of inflammation and consolidation, and from these centers, other areas radiate in many directions, but always inclosing small aerated patches; while the confluence of many such areas may produce the condition known as pseudo-lobar pneumonia. A section under the microscope shows the bronchial epithelial cells partly destroyed; here and there they are found raised from their bases, and leukocytes and masses of bacteria found packed between and under them, while the capillaries are engorged with red blood cells. The bronchioles become occluded with the products of inflammation, the air cells collapse, and later are filled with the results of active cell proliferation and desquamation. The inflammation is purely a catarrhal one, no fibrin being present. Resolution takes place through fatty degeneration of the cells that fill the alveoli. In the lobular pneumonia of the mixed infections, instead of following along the bronchial tubes, into the corresponding lobule, the inflammation invades the walls

and peribronchial tissue and passes over into the neighboring groups of alveoli, so that the typical lobular arrangement is disturbed. A cross section in such a case will show, under the microscope, the bronchi filled with pus cells, epithelium and bacteria, an intense round cell infiltration into the muscular and connective tissue layers, and the surrounding alveoli poorly defined, as their walls are also infiltrated with polymorphonuclear leukocytes. Fibrin is usually present.

The onset and course of influenza pneumonia is extremely variable, there being no such a striking clinical picture of the affection as we find in croupous pneumonia. The disease may be ushered in so quickly as to lead assurance to the belief that the disease is, primarily, a pneumonia. Usually, however, there is well marked evidence of a preceding involvement of the upper air passages; the coryza, laryngitis, tonsillitis and bronchitis, either associated or alone, point to an earlier infection of the respiratory mucous membrane. There may be simply a tracheitis, with the peculiar tickling and later burning sensation in the trachea, and which may be considered, to an extent, as characteristic of grippal infection. Again, the malaise, headache, pain in the bones and other symptoms of ordinary influenza may precede, over a longer or shorter period, the onset of the pneumonia. When fully established, influenza pneumonia is always marked by extremely rapid breathing, the dyspnoea at times becoming a most distressing feature and out of all proportion to the signs elicited by auscultation and percussion. It is of interest here to note the experimental work which has been done with a pure culture of the Pfeiffer bacillus, in which the bacilli have been killed by chloroform. When intra-venous injections of such cultures have been made in rabbits, the uniform results have been, marked dyspnoea and muscular weakness, which presents a striking analogy with the well-known symptoms in man. It is natural to assume, then, that there is produced by the action of bacilli, a toxin, which has a marked influence upon the central nervous system. The disturbance of the circulation is maintained by the quickened heart's action, the feeble and often irregular pulse, and the sluggish capillary circulation. Systolic murmurs may occur near the apex of the heart. There is no characteristic temperature curve; the high evening temperature with morning remissions being perhaps the most common. The fever rarely rises above 104°, and may at times become subnormal. Moderate pain in the chest is usually present and when very severe is probably due to a complicating plastic pleurisy. Repeated slight chills and sweating, particularly at night, are typical symptoms. The cough is very severe; dry, hacking and paroxysmal in the early stages, becoming looser, with free expectoration as the disease progresses. The sputum of the Pfeiffer bacillus pneumonia is to some degree, characteristic of the infection. It is of a greenish yellow color, muco-purulent, and disseminated throughout are peculiar small masses,

which from their shape, are evidently casts of the smaller bronchi, while larger, coin-like masses, of nearly uniform size and appearance, are also usually found. The sputum of the mixed infection pneumonia is generally mucopurulent, but varies at times to a great extent. It may be blood streaked and viscid, but is more copious and is not the intimate admixture of blood and sputum which constitutes the so-called rusty sputum of croupous pneumonia. The nervous system, at times, shows evidence of involvement by the presence of insomnia and delirium. There frequently exists, in the graver cases, an albuminuria with actual renal involvement. The physical signs are those of impaired resonance, areas of patchy dulness, feeble breath sounds and fine rales, especially over the bases. Broncophony is a sign of particular value in locating the scattered pneumonic areas. Bronchial breathing is infrequent, and then only when a considerable area of the lung is involved.

The diagnosis of grippal pneumonia, as a rule, should be made readily. The presence of an epidemic and the resort to a microscopical examination of the sputum will generally lead the physician to an early recognition of the nature of the pneumonia. There should be no excuse, except in unusual cases, for conflicting croupous pneumonia with influenza pneumonia. In those rare cases of grippal pneumonia in which an entire lobe is involved and which is the result of the confluence of many lobules leading to areas of larger consolidation, the slow hardening of the lung, the nature and microscopical examination of the sputum should make reasonably clear the character of the disease. What is more difficult and at times impossible, is to attempt a differentiation of the various types of the grippal pneumonia of mixed infection. Cases are not infrequently reported in which only the most careful microscopical examination of the sputa will clear up the diagnosis between acute tuberculous pneumonia and the pneumonia of influenza. It may be well for me here to report briefly a case coming under my own observation. The patient, a girl about eleven or twelve years of age, came to my office in the spring of 1903, with the following history. Two years before an aunt had died of tuberculosis in the apartments in which the girl was still living. Three months before, her father had died, after a somewhat prolonged illness, of pulmonary tuberculosis complicated by a cirrhosis of the liver. The girl had never been dangerously ill, although she had passed through some of the ordinary diseases of childhood. In appearance she was delicate and somewhat anaemic. At this time she had been sick for about a week. She complained of some pain over the right side of the chest and a severe headache. Loss of appetite, night sweats and weakness were present. Her pulse was considerably over a hundred, temperature 103°, breathing rapid and difficult, with a severe, hacking cough. Physical examination showed a moderate diffused bronchitis over both sides of the chest. At the angle of the scapula, on the right side,

there were a few areas of patchy dullness, with fine crepitant rales. Taking into consideration the bad family history, the fact of her having been exposed over a long period of time to the danger of tuberculous infection, I made a grave, though reserved prognosis. I had her put to bed immediately, and on the following day I made an examination of the sputum. The result showed the presence in almost a pure culture of the Pfeiffer bacillus, and the absence of the bacillus of tuberculosis. The disease ran its course in about four weeks, with night sweats, severe cough, muco-purulent sputa, pain, intense dyspnoea at times, prostration and the signs of a bronchopneumonia, over both sides of the chest. Convalescence was rapid in this case.

In general, the prognosis is favorable but is modified by the character of the prevailing epidemic, the age and physical condition of the patient. In the very young, the aged and those suffering from pulmonary tuberculosis or cardiac affections, the outlook is unfavorable. Certain cases show a tendency to pulmonary

oedema and great cardiac weakness. Cases of fatal syncope as the result of very slight exertion have been reported.

The nasal secretions and sputum should be disinfected and the patients isolated as closely as the conditions will admit. As in lobar pneumonia, the treatment of influenza pneumonia is largely sympathetic, and in the graver cases there is, in the dilated, overworked right heart, the same element of danger which must be combated. Digitalis, strychnia, normal salt injections and free stimulation with whisky must be relied upon here. Hidro-therapy, with the use of Dovers powder in children and of morphine in adults, may be relied upon to relieve the hyper-pyrexia, pain and restlessness. The inhalation of steam impregnated with creosote is of great value in ameliorating the severity of the cough and promoting free expectoration. In those cases in which an albuminuria is present, careful attention to elimination through the skin, kidneys and bowels is absolutely requisite. The after treatment is that of the convalescent stage of ordinary influenza.

County and District Societies.

PEORIA CITY MEDICAL SOCIETY.

Regular meetings are held in the Observatory Building, Peoria, on the first and third Tuesdays of each month. Membership 77.

Officers.

President Dr. J. C. Roberts
First Vice President Dr. E. E. Gelder
Second Vice President Dr. B. M. Stephenson
Secretary Dr. W. R. Allison
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The Peoria City Medical Society met in regular session at the Observatory building on Tuesday evening, January 3, with Dr. J. C. Roberts, in the chair.

Some business of a routine character was transacted. The essayist read a very instructive and interesting paper, one worthy of careful reading.

Movable Kidney.

Dr. Gelder read the paper of the evening. He took up the symptoms, etiology, method of examination, diagnosis, palliative, and operative treatments; under the latter head he gave a brief review of the operations which had been devised, and a detailed description of the Edebohl's method which he advocated. He then made the following report of five successful nephrorrhaphies.

I am indebted to Dr. Barton Cooke Hirst of Philadelphia for the privilege of assisting him in operating on the following two cases, and at this time for the privilege of reporting them.

Case I. Miss E. P., age 29, single, school teacher. Present illness began one year previous to operation, at which time she noticed that she kept her right shoulder higher than the left, and that while sitting in school she would

often lean toward the left side and stretch her right side; she said that doing this made her more comfortable. Ten months later she was suddenly taken with pain in the right side, simulating appendicitis, which lasted for a few days; this attack was followed by subacute pain and the sensation of something moving in the side.

Examination. Right kidney on line with umbilicus, and freely movable. Dr. Hirst catheterized both ureters and tied the catheters in to collect the urine pure from each kidney. In two hours the right kidney excreted 2 fl. drms., and the left 3 fl. oz.; both specimens were normal.

Operation. Feb 9, 1903, at Howard Hospital, Philadelphia. Lumbar incision made and kidney suspended by Edebohl's method. Convalescence uncomplicated. Discharged March 3, 1903.

Case II. Miss E. R., age 25, single, stenographer. Present illness. For 14 months has had a dragging pain of varying intensity in the right side of the abdomen; never nauseated, radiating to groin. Examination. Right kidney freely movable down to pelvic brim.

Operation. June 6, 1903, at Howard Hospital, Philadelphia. Lumbar incision, kidney suspended by Edebohl's method. One week later when I redressed the wound I found it had healed nicely; on palpating the abdomen I found a mass about 4x3 inches in size just above Pouparts ligament on the right side. It was movable to a limited degree; I asked Dr. Hirst to see her also and he diagnosed it a hematoma. Examination one week later the mass not as large and higher up than before. One week later she was discharged free of the symptoms and the mass nearly gone.

In a recent letter from Dr. Hirst he told me

that both patients reported at his office in September, 1904, being respectively 19 and 15 months from the date of operation, to let him know how well they were. He said they had been entirely relieved of symptoms by operation.

Case II, also writes me that in the two months following her operation she gained 20 pounds and has been in the best of health ever since.

It was at the request of Dr. R. A. Kerr of this city, that I kept the histories of the following cases, and that I have written this paper; I am therefore indebted to him for this privilege, and for his kindness in allowing me to assist him in the following operations.

Case III. Mrs. L. F., age 32, married, Peoria; 5 children, last one born two years ago.

Previous Medical History—Negative.

Present Illness. She dates her trouble from the birth of her first child. Her symptoms have been headache; backache of a dragging nature, with occasional attacks of sharp pain across the upper abdomen; some indigestion no constipation; is inclined to be despondent at times.

Examination. Patient a well built, well nourished woman, who says she never has been thin; weight 141 pounds. Right kidney easily felt, and freely movable in right side of abdomen.

Operation—Sept. 14, 1904, at Cottage Hospital. Essentially the Edebohl operation. The kidney was enlarged, being 15 cm. (6 inches) from pole to pole; it was markedly congested; capsule adherent, and when stripped back there was free bleeding from the parenchyma, which was controlled by the application of hot towels. No other complications, convalescence uncomplicated.

Case IV. Miss E. B. age 28, single, Peoria, stenographer since 16. Family history—two brothers died of nephritis.

Previous Medical History—Negative. Present illness—For five years has suffered from headache, backache, and a dragging pain in the abdomen; capricious appetite; nervous indigestion, palpitation, and polyuria; chronic constipation; patient says she has carried the right shoulder higher than the left ever since trouble began, and that she could feel a movable lump in her side by palpation.

Examination—Small woman, rather thin, (says she was heavier before trouble began); kidney easily felt and freely movable in the right upper quadrant of the abdomen.

Operation—Sept. 24, 1904, at Cottage Hospital, Edebohls' operation. Kidney not enlarged, but congested and capsule adherent. Convalescence uncomplicated. Patient kept in hospital longer than three weeks to treat her for nervousness.

Case V. Mrs. M. S., age 43, married 10 years, no children, no miscarriages. Previous Medical History—Negative.

Present illness—Five years ago, after doing other hard work, she was cutting grass with a heavy scythe when she felt something jump in her right side; though it caused her no pain she stopped working. The next time she bathed while rubbing her abdomen, she could feel a

movable lump in her right side; but as it was not painful she did not consult a physician at that time. Since then she has suffered from attacks of headache ending with nausea and vomiting; a dragging sensation in the abdomen—never very painful; palpitation of the heart, and has never been able to lie on the left side without having pain in the right side.

Examination—Fleshy, well built, well nourished woman; right kidney movable to pelvic brim and median line.

Operation—Oct. 1, 1904, at Cottage Hospital, Edebohls' operation. Kidney slightly enlarged, capsule tight and adherent; cortex congested, and bulged out on splitting the capsule. On reflecting the capsule, owing to the adhesions, there was considerable oozing of blood from the kidney substance; this soon stopped on the application of hot towels. Convalescence uncomplicated.

I do not think that present day writers honestly believe that repeated pregnancies, lacerated pelvic floors, external violence, or long wasting diseases are usual causes of movable kidney. It is another example of how one writer copies from another—possibly fearing he will be criticised if he does not include all of the old myths.

Harris has reported some very interesting work on a large number of cases to try to discover the relation of body conformation to this affection. He believes from his investigations that a congenital or acquired narrowing of the middle zone of the body is the greatest predisposing cause.

You will observe in the few cases I have reported to you that only one of the five women ever had a child, and that none of them ever suffered from a long illness. Case V gives an interesting history, and it would seem that in her case the kidney was dislodged by severe contraction of the muscles of the back; though this was likely the exciting cause, I believe there were predisposing causes possibly in body conformation, enteroptosis or something of that nature. Owing to the close attachment of the duodenum and hepatic flexure of the colon with the anterior surface of the kidney, it would appear that descent of these portions of the intestine would be an important factor, and it seems to me that this plus the weight of the liver is the only relation of tight-lacing to the occurrence of movable kidney. The kidney is so deeply placed that constriction alone could hardly displace this organ; but it could push down the other viscera which would in turn either press or drag down the kidney. Case I shows the effect of prolapse on the function of the kidney; in a given time the normal one secreted three fluid ounces of urine, while the other one only secreted two fluid drams or 1/12 the amount of the one in normal position. The great increase in size of the kidney noted in Case III may have been a result or a cause of its descent; I should think the former.

Dr. O. B. Will—The paper is timely and the subject one which is always interesting. I also believe that too much importance has been attached to the condition of late years. In

my work which affords me the opportunity of examining the abdomens of a great many women, I always ascertain the location of the right kidney as I have been interested in the frequency of the condition up for discussion tonight. In my experience about 20% of women have a movable right kidney, and I have observed it more frequently in unmarried women. As many patients go through life with this affection and never suffer from it I would not recommend operation in every case; but I do believe that we should fix the kidney if the symptoms are severe enough to warrant it. I agree with the paper that congenital predisposition is one of its greatest causes.

Dr. Kerr—It is my opinion that the severity of the symptoms, especially those which are reflex, depends on the nervous constitution of the patient. In those of the neurasthenic type this affection will produce marked symptoms, while those of a more staid disposition will suffer little from it. That secondary changes occur in a prolapsed kidney I am certain; I never operated on a case in which I did not find adhesions from past or present inflammation, and in one of the cases reported tonight (Case V) not only was the true capsule adherent to the kidney cortex, but the fatty capsule was so bound down to the fibrous capsule that it was very difficult to strip it off. As to the etiology, from my experience with railroad and like cases, I do not believe that trauma is a common cause of descent of the kidney. A contracted middle zone of the body I have observed in most of my cases, except the last one reported tonight and she had an unusually large middle zone. It seems to me that pressure of the liver must be a very potent cause of this condition. I hardly think that the explanation given for the prolapse of this organ in Case V is correct; if she had dislocated the kidney during the exercise described, the sudden tearing of it loose from its normal attachments would likely have induced more pain than she says she had. I would rather suppose that she caused a further descent of an already loose kidney.

With this affection there often coexists a certain degree of visceroptosis and of course lumbar fixation of the kidney will not stop the symptoms caused by this other abnormality, and this may explain why some cases are not relieved by operation. I believe, though, that the operation is useful in these cases as it removes a condition which favors descent of the other organs.

Dr. Roberts—From the etiological standpoint I have in mind a case which is interesting. A woman had been suffering from indigestion and constipation for five or six years prior to my seeing her. At the time I treated her she had no prolapse of the kidney. Later she fell into the hands of the nurses of the Peoria branch of the Battle Creek Sanitarium and they treated her by the frequent and long continued application of hot towels to the abdomen. The result was a marked relaxation of the abdominal walls, hemorrhoids, prolapse of the uterus, and prolapse of the right kidney. The pain

from the latter was very severe and no mechanical device would relieve it; but she was entirely relieved by operation. In this case it seemed to me that the relaxation of the abdominal walls was the cause of her trouble.

Dr. E. L. Davis—We should remember that the kidney is not fixed normally but that it has a certain physiological excursion, and in some people this range of motion is greater than in others but these persons do not need a fixation of the kidney.

Dr. Marcy—I have had considerable personal experience with movable kidneys and have known of many other cases. I am skeptical on the advisability of sewing them up. I have known of cases in this city where a lumbar fixation was done that failed to fix the organ, and it came loose again; in one case it was repeated. I would still hesitate before advising operation unless the symptoms were severe.

Dr. Gelder—The discussion tonight brought out just what I had hoped that it would; that is that this question has two sides. For the sake of the kidney alone there is, as I said, only one thing to recommend, and that is early operation to prevent secondary changes and perversions of function in it; but our patients are beings with many organs all of which should receive their due consideration when we are deciding the expediency of an operation. I think a conservative view to take of the matter—would be only to operate on kidneys which are pathological; and to consider them pathological only when they produce symptoms—either intra, or extra-renal.

Meeting adjourned.

FULTON COUNTY MEDICAL SOCIETY.

Regular meetings are held the first Tuesday of May, July, October and December.
Membership 43.

Officers.

President, J. W. Conelly.....Farmington
First Vice-President, S. A. Oren.....Lewistown
Second Vice-President, G. R. Blackstone.....Table Grove
Secretary-Treasurer, D. S. Ray.....Cuba
Neurologist, F. R. Miller.....Canton
Board of Censors, Maud T. Rogers.....Cuba

Dr. James E. Coleman of Canton read the following paper at the December meeting:

The Doctors' End of the Proposition.

The disparity of fees between the surgeon and the doctor is at present the source of much comment, and the question arises, "are medicine and surgery pulling apart?" That medicine is indebted to surgery we frankly admit, but does surgery owe anything to medicine? not at all; the city surgeon lives in a realm of grandeur to himself, his air of wisdom and importance is at times amusing. However, he is easily approached—if there is a fee. It is supposed that every Doctor is capable of taking care of every case that comes to him, sometimes it unfortunately happens that the country doctor, either from lack of hospital facilities, or the burden of multiplicity of diseases meets with a case which he feels it would be better for a specialist to treat.

This causes him much anxiety, and con-

cern. The surgeon promptly takes advantage of the doctors misfortune, and charges the patient all he can get. The doctor is supposed to "land" the surgeons fee. He assures the patient that he has made a diagnosis, and that the operation is necessary—also the cash. He tells his patient that the surgeon is a great man, that his life is safe in his hands, aside from the per centage of death necessary to the special case, and he prepares the patient for operation. So far so good, but how many doctors receive pay in proportion for these services? Very few, usually hard earned visits at \$1.50 per. Now in whom does the patient put his trust? In his home doctor, always, so he asks him to go along, is he willing to pay? Hardly ever. He is saving his money for the surgeon. Now what happens, the patient is landed in the hospital, and immediately is taken in charge by an Interne just out of school, with a swelled head, but no experience. The Interne knows the general practitioner has no brains, because if he *could* operate, *why* does he bring his patient "to us."

The doctor feels very much "like a cat in a strange garret." The surgical nurse eyes him reproachfully as if she feared he would step into the sterile instrument tray, and he is so much scared that he is likely to do so, before he gets through with these, "great ones of the earth." In the operating room the solemnity is great, the country doctor feels that the sign should be raised, "tread softly the dead are here."

After the operation the patient is calling for the home doctor, and the home doctor wants to go home. The Interne makes him feel that he is a usurper, no matter how much anodyne or stimulant medicines the patient has been accustomed to take. The average surgeon, who has no faith in medicine, orders it all discontinued—"at once," and the lack of these sustaining influences is added to the shock of the operation.

In all the long list of patients that I have taken to the hospitals during my 20 years of ministry to the sick, I have *never once* been asked by the surgeon *what* I was giving the patient, or consulted as to *what should* be given. Now, is the surgeon willing to regard the physician as a partner in the case? Never; the physician is only "the messenger" who "delivers the goods."

Now, what is the result? Every country doctor has an ambition to become a surgeon. They also desire to "tread on air" and absorb large fees. Is this good for either patient or doctor? we think not, better would it be for medicine and surgery to unite as in the good old days, the surgeon and doctor should go into partnership and divide the fee and surgery should quit "knocking" medicine.

That grand old surgeon Moses Gunn, who has never had a peer, taught, that surgery should not be made a specialty until after ten years in the medical field, while this is not good doctrine perhaps at the present day, yet the surgeon should be taught along with Christian scientists, osteopaths, magnetic healers

and mediums, who always lay claim to the healing art, that medicines are valuable aids to help the sick, and that the physician, humble and poorly paid as he may be, is yet an expert, in giving advice as to ventilation, diet, bathing etc. Small hospitals are springing up all over the country. The practitioners are taking post operative courses in surgery and doing their own operating, and whether he will or not, the city surgeon must, "divide the fee," and the country doctor is not leaving his business to go to the city with a patient and pay his expenses besides. The wave of lunacy is subsiding and medicine is coming back to its own. A dose of quinine taken early will break up a cold, the Christian scientists to the contrary notwithstanding. A dose of castor oil will affect the osteopath just as surely as it has the doctors patients during the past years, and the surgeon who can only affect his patient through a drainage tube, had better get down and out, and give somebody with brains a chance.

Now in regard to a commission being paid to the doctor by the surgeon without the knowledge of the patient. The Chicago doctors started an investigation along this line and the inference is, that the country doctor is trying to "hold up" his patient at the expense of the surgeon, and it is for the country doctor to refute this slander.

The average country doctor is as honest and honorable as the celebrated Dr. Wm. MacLure or the city surgeon, I have taken a number of cases to the surgeon, yet have I never received a commission, neither do I know of a case where a commission has been extorted, this I submit in defense of "the doctors end of the proposition." But I do believe that the case should be treated in this wise. The doctor should tell his patient that for so much money I will take you to the surgeon, and we will treat you, and share money and responsibility. All of which is respectfully submitted.

DECATUR MEDICAL SOCIETY.

Regular meetings are held in the Decatur Club Rooms the fourth Tuesday of each month
Membership 62.

Officers.

President Lynn M. Barnes
Vice President Clara Garber
Secretary-Treasurer W. C. Bowers
Board of Censors: E. A. Morgan, F. M. Anderson, J. Stebbins King.
Program Committee: W. C. Bowers, Chairman; E. J. Brown, W. C. Wood, A. Wilhelmy, L. M. Barnes.
Delegates to the State Society: Cass Chenoweth, W. C. Bowers, E. J. Brown.

The Decatur Medical Society held its regular monthly meeting on Dec. 30, 1904. This meeting was postponed from Dec. 24, 1904.

M. P. Parrish read a paper on **Acute Pancreatitis** and recited interesting cases that he had observed and showed specimen of inflamed pancreas obtained from post mortem; Tyler Meriweather opened the discussion.

W. K. Hoover was not present with his paper on **Blastomycetes with report of cases**, but the subject was discussed by A. F. Wilhelmy, Clara Garber and others.

CLARK COUNTY MEDICAL SOCIETY.

Regular meetings are held at Marshall, quarterly.
Membership 12.

Officers.

President Jos. Hall, Westfield
Vice President R. H. Bradley, Marshall
Secretary L. J. Weir, Marshall

Clark County Medical Society met at 4 P. M. Jan. 12, 1905, at Marshall. Called to order by the president.

Members present: Hall, Bradly, John Weir, H. W. Haslit and L. J. Weir.

Subject for the meeting **Prevention and Cure of Tuberculosis** was enthusiastically discussed by all present, many important points were made among them were the following: All people should destroy the sputum as it is the means of spreading tuberculosis, pneumonia, grip, typhoid fever and other diseases. Tuberculosis should be recognized by everyone as a seriously contagious and therefore preventable disease.

Outdoor exercise (walking one block to five miles daily) eating concentrated food (eggs, meat and milk) and lots of fresh air (in tent, on porch or in open room day and night, summer and winter) these are the best means of curing tuberculosis. Medicines are useful for symptoms, but we have no specific. After an animated discussion lasting two hours, society adjourned all regretting that we did not have two hours more time available.

CHAMPAIGN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Champaign at the Hotel Beardsley the third Thursday of each month. Membership 60.

Officers.

President.....J. M. Bartholow, Champaign
Vice-President.....C. M. Craig, Champaign
Secretary-Treasurer.....C. D. Gulick, Urbana
Censors..W. F. Burres, A. S. Wall, John Marten

The Champaign County Medical Society held its annual meeting in Champaign, Thursday, Dec. 15, 1904. In the absence of the president Dr. Salisbury, Dr. J. C. Dodds was called to the chair. Reading of minutes of the two previous meetings of the society were approved.

The following is an abstract of a paper delivered before the society by Prof. Frank Smith of the University of Illinois on **Tapeworms**.

The speaker called attention to the three species of tapeworms infesting human beings, with which physicians of this region are most likely to be concerned. With the aid of specimens and wall charts the principal facts of their anatomy and life history were described and the means of infection and prevention were explained. The following points are selected from the various topics receiving attention.

One of the most helpful publications dealing with the human tapeworms is Bulletin No. 19, of the Bureau of Animal Industry of the United States Department of Agriculture en-

titled, "The Inspection of Meats for Animal Parasites."

The human tapeworm altogether most commonly met with in this country is the well known "beef" tapeworm 12 to 25 feet long and consisting of a small scolex followed by 1000 to 1300 proglottids of which the oldest are filled with embryos and pass off from the human intestine with excrement. Such embryos are liable to reach the muscle tissue of cattle via the intestine and develop into the bladder worm stage, forming the "measly beef" of meat inspectors. The muscles of the jaw are almost certain to be affected, to a less extent the heart and tongue and to a still less extent other parts. Human beings eating such infected meat that has not been subjected to proper conditions for the destruction of the tapeworm larvae are liable to become hosts of the adult parasites. Prevention may be accomplished by destruction of the excrement of the human host of the adult worm and the tapeworm embryos contained or by such treatment of infected beef as to insure the destruction of the larvae.

The "pork tapeworm" is another species for which the human being plays the part of host for the adult worm. It is but rarely met with in this country in spite of the opinion of many to the contrary. Since the enforcement of regulations requiring rigid inspection of slaughtered animals in some parts of Europe, this species is also becoming much less common in those regions. "Pork" tapeworms are in general considerably smaller than the "beef" tapeworms but cannot be distinguished with certainty by size alone. The scolex of the "beef" tapeworm is provided with four suckers but no cirlet of hooks, while that of the "pork" tapeworm has both suckers and hooks. The uterus or median canal of the old proglottids of the "beef" tapeworm has seventeen to thirty branches on each side, while in the old proglottids of the "pork" tapeworm there are but seven to twelve branches on each side. This character can be readily determined by squeezing the old proglottids between two pieces of glass and examining it with a pocket lens. Old proglottids of the "beef" tapeworm commonly come off separately while those of the "pork" tapeworm frequently form groups of three or four attached together.

Embryos of the "pork" tapeworm commonly develop in the tissues of the hog forming "measly pork" and from such infected meat man may become the host of the adult worm. Unfortunately the body of man supplies the conditions necessary to the development of the embryo of this species which in its formation of the bladder worm stage may lead to serious disturbances in the human patient if such development takes place in some such organ as the heart, eye or brain as is not infrequently the case in countries in which this species is more common. A human being infected with an adult "pork" tapeworm may become a source of infection by the larvae for either himself or his associates. Prevention as in the "beef" tapeworm.

The echinococcus tapeworm causing the

hydatid disease of man, sheep and swine is as yet comparatively rare in the United States but is now established and increasing in frequency. Some cases have been reported from our own state. Statistics indicate that fifty per cent of the human patients suffering from this species of parasite die within five years. There is usually no remedy but the knife and this fails as often as it succeeds.

The adult echinococcus tapeworm lives in the intestine of the dog and attains a length of only one-fourth of an inch but an infected dog usually harbors hundreds of them at a time. From these adults, embryos pass off with the excrement and via the intestines and circulation are liable to reach the liver, lungs, heart, brain or other organs of man, cattle and various other animals. In these organs the larvae multiply and produce growths which may ultimately weigh many pounds and lead to the loss of function of the organ and to the death of the host. Prevention may be through not permitting dogs to eat viscera of infected animals about slaughter houses or elsewhere and by greater care in the relation sustained by human beings to dogs that by any possibility may be infected.

At present we enjoy far greater immunity from such parasites than do the people of most countries, but we must be intelligent and watchful if we would retain this advantage.

At the close of the reading and discussion of this paper, the society extended the author a vote of thanks for his contribution to the interest of the profession.

Dr. F. S. Diller of Rantoul, Ill., followed with a very interesting paper on "Tetanus," giving a detailed history of two fatal cases and treatment used.

Following a brief discussion of this paper Dr. S. S. Salisbury's valedictory address was read by Dr. Jno. Marten; Dr. Salisbury being indisposed with grip and unable to attend the meeting. The title of this paper was "the peculiarities and modification of disease of old age." After very carefully considering the anatomical and histological changes of the various tissues and organs incident to old age. The author proceeded to show in a strikingly clear way, that the disease in the aged necessarily means not only modified symptoms but in specific instances a modified pathology. The statement made by one of the members in the discussion of the paper, that Dr. Salisbury's paper read as though it had been prepared fresh from the autopsy table, was justified by an abundant evidence throughout, that the author was thoroughly acquainted with the minute anatomy and pathology of the disease with which his subject dealt. As before stated the doctor was unable to be present and at close of discussion the society voted him a message of thanks and sympathy.

Dr. Wm. Houn's resignation as a member of the society was next read and granted and the secretary authorized to notify State Society of his resignation.

The annual election of officers resulted in the following being chosen: President, Dr. J.

M. Bartholow; Vice-President, C. M. Craig; Secretary and Treasurer, Jas. S. Mason; Censors, W. F. Burres, A. S. Wall, John Marten. The former secretary Jas. S. Mason declining re-election, resigned and Dr. C. D. Gulick of Urbana was elected secretary. Dr. C. B. Johnson was appointed a committee on paper for the ensuing year.

There being no further business before the meeting the society adjourned.

P. S.—Drs. A. L. Collin, Naomi Pierce Collin, C. H. Zoger, applied for membership. Elected to membership in the society Dr. Lucy Exton, and Dr. Cyrus Newcomb.

LOGAN COUNTY MEDICAL SOCIETY.

Officers.

President, J. L. Lowrie.....Lincoln
First Vice-President, L. F. Curtis.....Elkhart
Second Vice-President, Maskel Lee.....Atlanta
Secretary, H. L. Oyler.....Lincoln
Treasurer, W. H. Kirby.....Chestnut
Membership 20.

The October meeting of the Logan County Medical Society was held in the city council chambers at Lincoln, October 20, 1904, President J. L. Lowrie, in the chair.

The following applications for membership were read and favorably acted upon:

J. T. McDavid, M. D., Lawndale; H. M. Van Hook, M. D., Mt. Pulaski; L. E. Rourke, M. D., Lincoln.

The subject of contract practice was brought up and discussed freely, the consensus of opinion being that contract practice is not ethical and is beneath the dignity of the profession.

H. S. Oyler of Lincoln moved that a committee of three be appointed to call a meeting of the physicians of the city of Lincoln to be held in November for the purpose of organizing a club society whose object would be to bring the physicians of the city into closer social and business relations.

Committee appointed were H. S. Oyler, R. M. Wilson and L. T. Rhoades.

J. L. Lowrie of Lincoln presented the society with a thoughtful paper on **Typhoid Fever.**

Dr. C. C. Montgomery of Lincoln gave a very interesting paper on **Drugs Used to Produce General Anaesthesia.**

Chloroform, Ether, A C E Mixture, Nitrous Oxide Gas.

Some points to be observed in the choice of anesthetic for a given case and some points to be observed in the giving of each.

Much has been written on this subject and each of them have their adherents in different parts of the country and it is to bring out the consensus of opinion in this community that this paper was written.

I wish to state in the very beginning that much more depends on the anesthetist than on the drug used in most cases.

Chloroform. This we place at the head of the list as it is the one we should use in 90% of all cases. It should always be procured of a reliable firm and put up in 4 oz. bottles protected from the light as it decomposes with age and

sunlight. Chlorine and Hydrochloric acid being set free and the chloroform becoming irritating and unfit for use. Chloroform vapor when given near an open light is decomposed into carbonyl chloride which is very irritating to the respiratory tract. Patient for this as for all of them should be kept on light or liquid diet and laxatives given or free purgation the night before and should not eat anything for six hours before it is to be given. If it becomes necessary to operate after a heavy meal the stomach tube can be used to empty the stomach. The effects of chloroform can be best controlled when given by the drop method on an esmarch frame covered by three thicknesses of gauze. The patient should not be frightened as this tends to produce shock; a few drops should be placed on the inhaler and plenty of air allowed with it so as to let the patient get accustomed to it for if you choke patient with the first few whiffs he is apt to protest against taking more of it. One should not tell the patient to count or take deep breaths but a better plan is to tell him to breathe naturally and supply the anesthetic to suit his breathing, color of face, reflex of eye and type of respiration. I often give an anesthetic from beginning to end without taking pulse, this tells you but little that the experienced anesthetist does not already know. To give an anesthetic with the least amount of danger, the anesthetist should know every step of the operation to be performed so as to gauge the anesthetic accordingly. If the operation is to be a laparotomy the patient should be deeply under for the first incision. He should know how long it will take this particular surgeon to cut through the abdominal wall as the skin is the most sensitive part and pain acts antagonistic to chloroform. For the rest a small amount will suffice. Patients stand manipulations inside the abdomen much better if not too deeply under the anesthetic, especially is this true if large tumors or a large amount of fluid is to be evacuated where pressure on the large vessels is rapidly removed. Later the anesthetic can be increased when stitches are to be placed. For a curetage patient should be deeply under the anesthetic when dilatation of cervix is begun—this will arouse her some anyway and the curettement can be done with a small amount more. This operation can be done without pain on less than two drams of chloroform and so with a circumcision if patient is nicely under the anesthetic at time of incision no more need be given.

The points I wish to bring out are these—there is no set rule for giving chloroform but every patient and every operation is a case unto itself and must be governed accordingly and do not to attempt to instruct the patient how to take the anesthetic but give it to him. It is well to anticipate his fears. Tell him that he will feel at first as though it was choking him but that this will soon pass off. To encourage him tell him he is doing fine, this will allay his fears. If patient becomes nauseated crowd the chloroform, this will stop it. If you notice ashy pallor and irregular breathing stop the anesthetic and give air. The tongue should be held out by catching jaws at the angles. If this is

not watched he becomes asphyxiated and receives the vapor of the anesthetic not sufficiently diluted with air.

Some cases where chloroform is not suited where any other anesthetic could be given. First those few unexplainable cases where the patient is found not to take it well. Ether should be resorted to in cases of adenoids with anemia, cases of shock and extreme and prolonged weakness.

Chloroform in Labor—no well authenticated case of death due to this anesthetic has to my knowledge ever been reported when it has been used at this time. This condition some way robs chloroform of its dangers and in over 100 cases where I have given it at this time I have never seen nausea due to the anesthetic either at time of giving or following its use. This I cannot explain and only state facts as I have observed them. My experience with it at this time is the excuse for the following statement: That no woman, especially a primipara, should be asked to bear the intense pain of last stage of labor without its aid. I would only caution with this statement the uterus should be more closely watched to see that one gets good, firm contractions and it is well to guard this by giving one dram of Ergot after the expulsion of Placenta. The perineum can be protected better and pains better controlled at this stage when an anesthetic is used. The following is from Hewitt on anesthetics.: From an analysis of 210 fatalities due to chloroform in general surgical practice, he finds 150 in males and 59 in females; one not reported. 109 medical cases collected by the committee of the Royal Medical and Chirurgical Society—101 collected by Keppler, age ranging from 5 to 60, age seeming not to enter as an etiological factor. Nature of operations: Amputations heads the list of fatalities, these being the operations in which we would expect to find shock entering as a factor; then later in the list we find 18 for extraction of teeth—this being $\frac{1}{2}$ the number for amputations. As an explanation for this the patients are less carefully prepared and anesthetic often given in sitting or partially sitting positions, which should not be done with chloroform, and then too, it being a minor operation, is apt to be done in a stage of excitement. Stage of anesthetic at which death occurred before full effects of chloroform—93 during full effects, 68 after operation, three not stated.

Cases that have come to my notice and not reported and hence are not for publication—First case: Boy of eight years, suffering from adenoids, died from first few whiffs of anesthetic. 2nd. Male, aged 30; injury to finger; attempt at removal with ethyl chloride, then cocaine, then when patient was in shock from pain, chloroform. Died as in previous case. 3rd. Medical student as anesthetist, interested in operation; patient died fully under anesthetic.

4th. Two cases in heavy drinkers, severe crushing injuries to limbs; died in first or beginning of second stage of anesthetic.

Several cases are recalled where it became necessary to resort to artificial respiration, two

due to allowing tongue to drop back, not allowing a sufficient amount of air to mix with the chloroform vapor. Two cases due to excitement of anesthetic putting patient too deeply under anesthetic then allowing patient to partly come from under its influence then as he began to struggle, quickly putting patient too deeply under again.

One case when anesthetist was too deeply interested in operation to watch patient as closely as he should. Patient received an over supply of anesthetic, artificial respiration continued 20 minutes, patient recovered.

Ether. This should be kept in well stoppered cans; it is decomposed by air and sunlight, acetic acid is set free, rendering its vapor very irritating. Can be given with Allis inhaler, paper cone or a close inhaler, or by the drop method. Ether should not be used in operations involving the brain as it causes too much congestion. It should be used when there is a suspicion of trouble in the lung, as it is said to arouse to activity latent tuberculosis.

In atheroma as it raises the blood pressure and there is a tendency for the patient to struggle, it may cause cerebral hemorrhage. Its inflammability is great and should not be nearer than 8 feet to an open light.

It is more apt to be followed by bronchial troubles and pneumonia than is chloroform and doubtless causes more irritation to the kidneys. It is to be preferred to chloroform in cases of shock, in adenoids, and for minor operations where it is advisable to operate in stage of excitement.

A C E Mixture. Best given by one drop method—it acts more slowly there is not the depression of the chloroform nor the excitement of the ether and can be used where the others are feared.

Nitrous Oxide, Laughing Gas. An expensive apparatus is needed. This produces a temporary anesthesia. It acts quickly and is chiefly used for the extraction of teeth. It is practically free from danger. An apparatus is in use for the giving of gas and chloroform, gas and ether, gas and oxygen but with this I have had no experience.

The bowels and bladder should be emptied before taking gas as this is apt to cause an unconscious evacuation of one or both organs. If the urine is examined the following day after chloroform or ether has been given it will be found to contain red blood cells and I recall a well marked case of hematuria following anesthesia; in this case, two days preceding this anesthetic anesthesia had been used for diagnostic purposes. The anesthetist should be furnished with a careful history of patient, age, sex, temperament, nature of operation and a copy of the urinalysis. Then if the cautions and peculiarities of the different anesthetics are observed and the proper ones chosen there should be but few accidents due to the anesthetic.

Methods of Resuscitation. Stop the anesthetic. If the respiratory centers are at fault raise the foot of the table. Artificial respiration.

Strychnine—plenty of fresh air, oxygen if

convenient, if acute dilatation of heart give digitaline, if from shock coupled with anesthesia. Stimulate, give strychnia, nitro-glycerine, digitalis, normal salt solution and keep warm.

After reports on cases by several members, the society adjourned.

H. S. Oyler, Secretary.

MORGAN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Jacksonville the second Thursday of each month.

Membership 42

Officers.

President J. W. Hairgrove
Vice President Josephine Milligan
Secretary David W. Reid
Treasurer E. T. Baker

The Morgan County Medical Society met in regular session Thursday evening, January 12, 1905, with 14 members present: Drs. Baker, Thompson, Crouch, Cole Norbury, King, Reid, Hairgrove, Dewey, Adams, Day, Black, Pitner and Campbell. Miss Seybold, Miss Chrisler and Mr. Stacy were present as visitors.

The minutes of the last meeting, including a detailed report of the Secretary and Treasurer for the past year were read and approved.

Dr. Baker called attention to the surplus of money in the treasury and suggested a change in the by-laws to lower the dues of the Society.

The Committee on Printing the new Constitution reported and the Secretary was instructed to furnish a copy to each member of the Society calling attention to certain important changes.

The Secretary called attention to a communication from the Board of Health regarding the free examination of specimens, also a petition to Congress regarding the incorporation of the American Medical Association.

Attention was called to some changes in the new Constitution, affecting membership in the arrears for dues. On motion of Dr. Black the Treasurer was instructed to advance to the State Treasurer the annual dues of this Society so far as collected, as an aid to the State Society in its work.

The paper of the evening was by Dr. Carl E. Black, consisting of a review of Dr. G. Stanley Hall's new book entitled "Adolescence—Its Psychology and its relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion and Education."

As outlined by the reviewer, the work consists of two volumes of about six hundred pages each, and discusses the various topics in their relation to growth and development. Special attention was called to the fact that the work does not appear to have been written from any single professional point of view, although the psychology of the author largely predominates.

It contains chapters of as much interest to the educator as to the psychologist, as attested by the chapter on intellectual development and education, as compared with the one on feelings and instincts. It is of as much interest to the lawyer in its treatment of faults, immoralities and crimes as it is to the physician in its dis-

cussion of diseases of mind and body. It is of as much interest to the theologian in its handling of the psychology of conversion, church confirmation, confession, etc., as it is to the physiologist in its chapters on body growth and development, nor is it of less interest to the criminologists, anthropologists and sociologists from various points of view.

It is a work which every physician should carefully study and from which each one of us could gain much valuable information.

In conclusion the paper quoted extensively from the chapter on adolescent girls and their education, and brought out plainly the fact that the proper education for the girl has not yet been developed. The education of the girl and the purpose of that education in the woman is well summed up in the following sentence:

"To be a true woman means to be yet more mother than wife. The Madonna conception expresses man's highest comprehension of woman's real nature. Sexual relations are brief, but love and care of offspring are long. The eliminations of maternity is one of the great calamities, if not diseases, of our age."

Dr. Pitner said he was inclined to think some of Hall's statements were altogether too sweeping, and some of his statistics gathered to support and prove previously formed conclusions.

Dr. Norbury said: He regarded the work adolescence in its broad psychological and philosophical aspect as epoch marking, first, in the field of original research and exhaustive study of the literature; second, it will be the reference work for years to come for students in psychology as it is the only book in the field upon the subject. He differed with the last speaker regarding it being based on preconceived ideas supported by an accumulation of selected literature, on the contrary he said, it was the result of years of work, compiled and observed studied and sifted and in a masterly manner. The conclusions, the deductions were rational, scientific and a monument to the indefatigable energy painstaking research of the greatest practical psychologist of this country, if not of the world.

Hall is a friend of the young man and young woman and his investigations will be of inestimable benefit to them in shaping educational health and sociological problems. Educators, physicians, sociologists will all go to this great work for facts and suggestions and it is a duty which we who deal with the practical psychology of adolescence to study and work to help solve these perplexing problems of youth."

"The book should be read by laymen they will better understand youth and better able to guide them aright.

After discussion of the paper the Society passed to reports of cases. Dr. Norbury reported a case of Delirium Tremens with multiple neuritis and insanity, followed by death. He said that Delirium Tremens needed to be fed rather than drugged, and that if we would use more nutritives and less hypotics we might save some of these cases.

Dr. Reid reported a case of Retained Placenta

for six weeks, after abortion at early period. No bad results.

Dr. Hairgrove reported a case of Primary Repair of the Cervix with good result and prophesied that this operation would be more frequently done in the future than in the past.

Dr. Adams reported a case of Removal of Cataract in a man of over 80 years, with local anaesthesia. Result good.

NORTH CENTRAL ILLINOIS MEDICAL ASSOCIATION.

The thirty-first annual meeting of the North Central Illinois Medical Association was called to order at 10:30 a. m., Tuesday, December 6, 1904, at the city hall, Pontiac, Ill., by the president, Dr. E. W. Weis, of Ottawa.

After roll call to which 20 members responded, Rev. Clark, of Pontiac, read a portion of Scripture relative to the physicians of Biblical times and followed by prayer.

Moved and carried we defer the address of welcome until first order of business after dinner.

The minutes of previous meeting were read and approved as read.

Dr. Marshall of Pontiac, being the only member of the Board of Censors present, it was moved and carried that the chair fill vacancies.

Drs. Knoblanck of Metamora; E. E. Perisho of Streator and Ross of Pontiac, were named to serve on said Board.

The applications of Drs. William E. Ranney Smith of Grand Ridge, Edward D. Kilbourn of Aurora, John Henry Veatch of Connell were read, accepted and referred to Board of Censors.

Dr. Ross, chairman of local committee of arrangements reported that the members of the association would be entertained at 6:30 p. m., at the Masonic hotel with a banquet by the profession of Pontiac and that all members present outside Livingston County, would receive free tickets and those in Livingston County would purchase tickets at \$1.00 each.

The treasurer's report was read and referred to Board of Censors for auditing.

The Board of Censors were called upon for a report relative to the charges preferred against Drs. Rohrabough and Rabe last year, but no report was forthcoming.

Dr. J. F. Dicus of Streator read a biographical sketch of Dr. James A. Freeman of Millington, who died May 8, 1904, and submitted the following resolutions which were unanimously adopted:

The subject of our sketch Dr. Julius A. Freeman died at his home in Millington, Ill., Sunday morning, May 8, 1904, after a brief illness of ten days from pneumonia.

Julius A. Freeman was born in Worcester township, Oswego County, New York, March 9, 1828, the eldest son of Rev. F. R. and Lucey R. Freeman, and was in his 77th year.

When he was six years old his parents took him to La Grange, Lorain County, Ohio, where he was reared and where he received his education, and at the age of fourteen commenced the study of medicine. After his graduation from the high school of that place, young Free-

man engaged in teaching for several years, giving a portion of his time to the study of his chosen profession. His first course of lectures he took in Rochester, N. Y., at the Central Medical College in 1851 and 1852, and graduated at the American Medical College, Cincinnati, February 3, 1855. In addition to the above Dr. Freeman attended the first and twelfth sessions of lectures at the Bellevue Hospital Medical College, N. Y., and March 2, 1877, received an honorary degree from the Chicago Medical College. He first began practicing in Ohio with his uncle and preceptor, Dr. Julius Beeman, of South Cleveland, Ohio, and 1852 came to Newark, Kendall County, Illinois, where he continued in practice until September, 1861. At this time he raised a cavalry troop company, known as company K, 8th Illinois Cavalry, of which he was commissioned captain, resigning however, December 20th the same year. In August, 1862, he became assistant surgeon of the 106th Illinois Infantry and went out with them, but his health failing he was compelled in July, 1863, to resign and return home. Having recuperated he obtained a commission in September, 1864, as surgeon of the 106th N. Y. Infantry, and in January following he was assigned to take charge of the 3d division hospital of the 6th Corps, in which capacity he served until mustered out at Ogdensburg, N. Y., in July, 1865.

After his discharge Dr. Freeman returned to Newark and resumed his practice, continuing until 1875, when he moved to Chicago, where he remained about two and a half years.

The doctor has been twice married, on the first occasion, September 26, 1849, at Pittsford, N. Y., to Lucy S. Spellman, and by her had eight children, three of whom are now living, Corwin A., a physician at Leland, Ill., Vesper, a painter by trade, and Herbert H., a locomotive engineer. His present wife was Mrs. Emma Cox, of Manlius, N. Y., and by this second marriage there is one son, Harry. Dr. Freeman was a member of several medical societies, among them the Aurora Medical and LaSalle County Medical, North Central Illinois Medical, Illinois State Medical, American Medical Association.

He was a thirty-second degree Free and Accepted Mason, a member of Hesperia lodge, Chicago, of the Royal Arch Chapter at Sandwich, Ill., the Council and Knight Templar Commandery at Ottawa, Ill., and Oriental Consistory of Chicago, Ill.

Whereas, The relentless hand of death has removed from our midst another honored member of the society, Dr. Julius A. Freeman, and

Whereas, The members of this society who for years were associated with our departed friend, and knowing as we do his sterling worth, as a man, upright and just, anxious and willing to assist with word and deeds those with whom he labored; therefore, be it

Resolved, That in the death of Dr. J. A. Freeman this society has lost a faithful, true, and conscientious member, one who exemplified the highest type of the physician, with fidelity, and sincere regard for his fellow man, and richly deserves the encomium, "Well done, good and faithful servant."

Resolved, That these resolutions be entered

upon the minutes of this society, and a copy thereof be furnished to the bereaved family.

Communication from Dr. Schwuchow, who had removed to 122 Center st., Chicago, and asking that his name be dropped from roll was read. Moved and carried his request be granted when dues were paid to date, viz. \$1.00.

Communication from Medical Institute of Bibliography and Bureau of Translation was read and filed.

Letter from Dr. Norman Leeds of Belmont, Ill., who on account of health, desires to sell out; read and filed.

Communication from Secretary State Board of Health, relative to the laboratory for bacteriological research which has been established at Springfield for the benefit of the physicians of Illinois, was read and ordered filed.

Communication from Dr. J. A. Egan, Secretary State Board, relative to the third circular on the cause and prevention of consumption was read and referred to a special committee of three to report at the present meeting. Drs. Pettit, Pearson and Sexton were named by the president as said committee.

Dr. E. W. Weis, suggested the following changes in the constitution:

Art. 1, Sec. 2 of the constitution should have the following words added to it, "and must be a member of the local county society," if one exists in the county in which he lives.

Sec. 4, substitute for the words, "State of Illinois or elsewhere," "district No. 2," as established by the Illinois State Medical Society.

Sec. 7, should have the words, "State of Illinois," changed to "district No. 2."

Art. 10, Sec. 4, should be amended to read, "subdivision 4" a committee on program.

The duty of this committee shall be to provide a scientific program for the annual meeting.

Dr. Ross of Pontiac reported word from Dr. Ziesing of Peru who said he would be unable to attend on account of sickness. Moved and carried his communication be filed.

Also communication from Dr. Jane Reid Keefer with best wishes for Society and regrets at not being able to be present.

Moved and carried that we consider the first order of business for after dinner, moved and carried, that the welcome exercises be set for 2 o'clock.

Adjournment to meet at 1:30.

Tuesday, 1:30 p. m. Meeting called to order at 1:30. Dr. Ross for local committee, reported tickets for banquets at the disposal of the visiting members. The general programme being the next in order, Dr. E. E. Perisho read the first paper, subject, "Four Instructive Emergency Cases of Appendicitis," after which a recess of five minutes was declared in order to select a nominating committee.

Called to order again at 2 o'clock. The address of welcome on behalf of the city was tendered, in the absence of the mayor, by Mr. Graves, of Pontiac, who gave the Association a hearty welcome, which was responded to by the president, Dr. Weis.

PRESIDENT'S ADDRESS.

The Physician and the Medical Society.

By Edmund W. Weis, M. D., Ottawa, Ill.

As your presiding officer it becomes my pleasant duty to offer you some observations of a general character, as well as some seasonable advice. The latter I know will be superfluous, but the former is based upon experiences either of self or of other more competent observers.

Our profession is certainly one of apparently contradictory elements. Primarily entered into for the purpose of alleviating suffering and converting abnormal physical into normal conditions. All this however at the modest consideration of the right to existence and the pursuit of moderate pleasure. Secondly the physician, with full knowledge of the penalty exacted is imbued with, and urgently expresses the desire to prevent absolutely the very demand for his services. In other words the medical profession stands today as it has always stood, ever ready to hasten to the call of the afflicted and by the spread of his sanitary knowledge aid in the suppression of conditions that make necessary his skill to heal. Viewed in the abstract the physician is the true philanthropist. In no other walk in life can a parallel be found. Nowhere is there exhibited that same unselfish spirit. No accusation of selfish or self seeking interest can therefore be seriously entertained as resting against the profession as a whole. These premises being true how are we to best continue in future so as not only to keep up our present standard, but to advance the same for the greatest good for the greatest number.

The science of medicine not being an exact one, its birth and evolution unfortunately was for centuries covered with a pall of superstition. Born in Egypt and only practiced by the priests the natural result followed in that it became a part of their duty to heal the sick. Through ignorance of the operations of natural laws the effects of treatment by drugs and suggestion was ascribed to the workings of supernatural aids. History is constantly repeating itself, as we see today similar methods being employed, and that in spite of the immense fund of knowledge obtained governing the order of nature.

In the realm of sanitation we are liable to think that at the present time the medical world has almost established correct method by which all kinds of contagious diseases may be prevented; but to our astonishment when we read ancient history we find that what is being preached and practiced today was old long before the days of Christ. Centuries before Christ Moses acquired such knowledge from his studies with the priests of Isis that later allowed him to deduce philosophically the facts of certain causes, which eventually actuated him in laying down such laws of preventive medicine that they can scarcely be improved upon today.

In the prevention of the great White Plague if the laws promulgated by Moses had been lived up to we might almost have the assurance that

tuberculosis would long ago have practically been exterminated. It is a fact that the semitic race is practically exempt from that dread disease. Behrend of London, states that in a practice of thirty-five years he has not seen a case of tuberculosis occurring in an orthodox Jew.

What Moses did not know was the bacterial origin of disease, but his deductions of the facts of certain conditions were absolutely correct. And on down from Hippocrates we find the same struggle (the cure and prevention of disease) always the same. Opposing it we find the same spirit of antagonism sired by superstition and nurtured by ignorance, continuing to the present day. We are likely to think that at the present time the lay mind is unable either to grasp the immense sacrifice made by physicians, or too densely indifferent to its own welfare. That this is not true, that it is only a continuation of the same mental process that controlled the people centuries ago, we need but look back into history both ancient and modern. Because the heathen and later the christian priests became the healers, the art of medicine was supposed to be of divine origin. The remedy was prescribed by oracular prescriptions or later by direct appeals and suggestive devotion. The desire for miracle working made superfluous any systematic study. Therefore the study of pathology was restricted to its signs and symptoms, and anatomy to comparison only. The antagonism was so early established that no dissections of the human body or post-mortem investigation was countenanced. The argument was sincere in that if the illnesses were of demoniacal visitation the opposite remedy was obvious. This sentiment was naturally fostered and encouraged by those who profited thereby. It is a matter of intense regret when we look down the avenues of time and see their convergence to the darkest and intensest blackness of superstitious ignorance. Our regret is enhanced when we view in the light of modern knowledge that there seems to be an irresistible impulse in us at the present time to follow in the same footsteps. This is simply a survival of instinctive ideas of preservation transmitted by centuries of ancestors.

In spite of the teachings of Galen which were practically the first of a rational system of medicine, as well as the continuance of the same system by the Jews in the earlier centuries of the Christian era there was a return to the same old superstitious notions of cause of disease with also its necessary concomitant of remedy. It is useless for me to dwell any length of time on the various restrictions laid on physicians by church authorities of all isms. The fourth Lateran council in the thirteenth century forbade physicians to prescribe without first calling in an ecclesiastic for consultation (Girdner). How the Reformers believed that Satan was the cause of all illness. It is only a little more than a century ago that insanity was declared a disease by statute in France and not a possession of devils.

It was not until Vesalius in Spain risked liberty and life by informing himself by the actual dissection of the human body both of anatomical relationship and pathology. With

his knowledge given to the world the advent of medicine was slow, the obstructions still continued. It required a number of years for Harvey's circulation of the blood to be accepted and Jenner met with ridicule and disbelief in giving vaccination to the world. On the other hand it accepted with ease the various methods of cure by divine intervention, by the aid of relics, etc., by sacrifices, by journeys to special places, by the laying on of hands of kings, by mesmerism, by brasses and by tar water; today the same is evidenced by the faith cure, river Jordan water, christian science, spiritualism treatment, schlatterism, sheet of paper on the breast for sea sickness, rattlesnake rattles for headache, iron finger-ring, the potato and buck-eye. This is what we are up against right now.

I do not wish to take up your time in speaking of the enormous stride made by medicine in its entirety in the last century and more especially the last fifty years. Guttenburgs invention and the discovery of the compound microscope are the keystones of this colossal structure. It would be useless to point to all of this when you are trying to protect your neighbor from himself. I say, no amount of absolute knowledge is sufficient to convince man that he must be protected from himself. And still the physician persists and again insists in spite of opposition to plant and cultivate the seeds of knowledge, so that the man may live and the doctor work the harder. It is discouraging work, my friends, for we have scarcely laid our hands on the plow. How can we lighten this labor, how can we accomplish the good we have set out to do, for do it we must? We can no more take a step backward than we could return to the ancient methods of diagnosis. The solution is evident. A revision of labor. The old maxim in "Union there is strength," cannot be better applied than to this condition. Our union is the medical society. It is the one common ground on which we meet to organize and reorganize our forces for the common good. The benefits that the individual doctor receives by such association are many and to my mind in the future will be much increased. From the professional standpoint I can say that the physician who affiliates with society work receives a greater return than by any other investment. There is so much to say on this particular phase of the subject that in a limited address of this character, I can only touch upon some of the most important. Chief of these, to my mind, is the privilege of being classed in the Blue Book of the American Medical Association soon to be issued. This will only contain the names of physicians in good standing in the local societies. This at once places him in the catalogue of the advanced and up-to-date physician, the cream of the profession. This carries with it the assurance that the physician is all that it implies, namely: he has the qualifications of the skilful and competent doctor. That he has received the benefits of medical intercourse by society work, in receiving and giving experiences and results of study from and to others. On this one line alone the benefit is inestimable. No one in his life time can have the personal knowledge of

all things medical but many can increase the percentage. The dissemination of knowledge by the relation of these experiences is one of the greatest factors in society work. This, of course, is beyond all question the chief object in our affiliated labor. Its result in this particular are great. Before the days of the post graduate course it was the only school for the practitioner at which he replenished his stock of knowledge. It assumes that purpose today to a vastly greater extent than many are willing to give it credit. The interchange of experiences, results of study and observation, meeting with sharp scrutiny winnows, the chaff from the wheat. It is in discussion of this character where all are earnest, that there is a concentration of energy that cannot help but result in great good to the greatest number. Aside from this the doctor who is not a member of a medical society is looked upon rather askance. A suspicion lurks that he is not quite all that he ought to be, and in the majority of instances this is true. Give me one who states that he has no need for society work, and you will generally find a physician who is unworthy of the name.

Now to the objective point that I had most in view in this paper. I trust that you will understand that now I am speaking in my advisory capacity. In order to more completely combat ignorance and perhaps selfish opposition the labor of carrying enlightenment to those who are in the dark, it becomes the duty of every physician to aid by lighting the flame of intelligence, and casting its rays into the gloom that surrounds us. And who is so well qualified for this work as one who has had his lamp replenished where knowledge is gathered together?

I believe I am safe saying that primarily we fear the penalty of the law. Its provisions being wise we soon respect it, and finally noting its good qualifications we arrive at the point of loving it. Therefore it must necessarily be that through law, the will of the majority, we must look for the eventual solution of our problem. No law, however, has stood the test of time and practice that was not demanded by the people governed by it. And just here is where the divided labor of the medical profession radiating from and to concentrated effort must make its greatest appeal.

Every physician is a twig in the bundle that the old man tried to break collectively and failed; so each one of us is a missionary working to the only one end, to conserving the best interests of our common whole. If we wish any restrictive measures, either in medicine or sanitation placed upon us, it is only by the individual endeavor of the doctor that success can be hoped for, and who is so well qualified to make this endeavor; to place advice and knowledge where it can count the most, as the member of the medical society.

I regret to note a tendency in some quarters to the sentiment of the disestablishment of all medical laws. Their chief argument is that we must be free and untrammelled to do as we please and be entirely unhampered in everything that pertains to medicine. This can be

dismissed by the statement that we are the law, that the observance of it by recognizing its rules has placed us on the eminence where we stand today. We owe it much.

If we wish to look at this subject from a mercenary standpoint the physician who is a member of medical societies most certainly enjoys advantages that those who are not do not. It is a fact that goes without fear of contradiction that the physician whether because of his attendance at society meetings does receive peculiar benefits of advertising, and in consequence thereof a greater increase of patronage, which from a monetary standpoint is not to be despised. This is legitimate advertisement. There is another point that proves my contention. Insurance companies today will not employ physicians who are not members of medical societies to make examinations, unless otherwise very highly recommended. As nominator for a number of leading insurance companies I speak from experience. Appointments to official positions frequently are based upon the question of society affiliation, and most all of you remember that but recently officials high in the federal government pledged themselves not to recommend any medical man to an official position that was not a member of the Illinois State Medical Society. These points are offered not as an inducement, but as showing the trend of the general public opinion, as between the affiliating to the non-affiliating physician.

The last but not least is the social side of society work. When I look upon this gathering I feel that it is not a compliment to the individual physician, but one to the society. We meet here in friendly intercourse and good fellowship, making acquaintances and friendships which are lasting; filling us with the sentiment of wishing to aid and assist those that we can, as well as desiring the same privileges from others. Much could be said about the fraternal spirit that I have always found prevailing in the meetings of the medical society. You all feel it, you all have it. I do not know of anything that makes me feel better than when I receive a letter and it is subscribed "Yours fraternally." There is something about that which makes me feel good all over, and I know when I read it that there is someone who looks upon me as a brother; and that is the all prevailing sentiment in society work. We are brothers.

Dr. J. J. Stiles, on behalf of Pontiac Medical Society, gave a hearty and enthusiastic welcome, and Dr. Wm. O. Ensign, of Rutland, responded.

Nominating committee was named as follows: Bureau County, Dr. O. J. Flint, of Princeton; De Kalb County, Dr. J. M. Kaiser, of Savannah; Grundy County, no representative; Kenlall County, no representative; LaSalle County, Dr. J. F. Dicus, of Streator; Lee County, Dr. E. S. Murphy, of Dixon; Livingston County, Dr. Marshall, of Pontiac; Marshall County, no representative; Putnam County, no representative; Whiteside County, no representative; Woodford County, Dr. Knoblauch, of Metamora.

The Secretary reported that Dr. J. Wallace Whitmire, of Forrest, who joined the Associa-

tion in 1877, and was dropped in 1899 for non-payment of dues, had applied for readmission, and the Secretary accepted \$7.00, he having paid \$18.00 before being dropped. It was moved and carried that the doctor be restored to membership and be made a life member.

The special committee named to report on the letter from the State Board of Health relative to consumption, reported with the following resolution, which was adopted unanimously:

"Resolved, That we congratulate the Illinois State Board of Health upon the magnificent work they are doing in the present crusade against tuberculosis. We do especially commend the circular which they have issued on consumption, and recommend the members of this Society to assist in its general distribution."

Four Instructive Cases of Emergency Appendicitis.

Dr. E. E. Perisho: During the past few years the subject of appendicitis has been so thoroughly discussed in this and all other societies, that I feel like offering an apology for approaching such a seemingly worn out subject. For at first thought there is but little more to learn or say concerning it, and we should now all be of one opinion, as to the proper management of a given case; but such is far from being true, as I know of no disease in which there is more diversity of opinion as to treatment and none that is more puzzling as to prognosis.

A careful review of the literature and clinical experience teaches us there has been but little learned, and what we have learned is subject to many variations. As I know of no disease in which the clinical course and symptoms (as we have learned to read them) tells us so little as to the true pathological condition present, and none which more often surprises the operating surgeon than does appendicitis, for with all our study, we have absolutely no positive way of predicting the actual condition within the abdomen except by the laparotomy.

The following cases taken from a series of cases occurring in my practice during the past few years, fully illustrate the above, and that a seemingly mild case may be a very serious one.

Case 1. Mr. Joseph M., aged 16, a healthy rugged farm boy, who had never been sick, came to the office March 18th, 1899, complaining of being sick at his stomach and of pains in the bowels. On examination he was found to be tender over McBurney's point. Pulse and temperature normal. The bowels were unloaded, and rest with abstinence of food was advised until all soreness disappeared, which was in about three days. I saw him only the one time during the attack.

Second Attack, October 24, 1902. Three and one-half years later he was taken suddenly sick during the night with vomiting and severe pains in his stomach and bowels. All continued severe for about eighteen hours, when the pains became localized in the right iliac region, and

vomiting ceased. Pulse 100, temperature 100. Third day temperature 101, pulse 110. The area of tenderness had spread all over the abdomen with tympanites. The peritonitis continued for two weeks.

Operation was advised in the beginning of the attack, but refused unless it was thought to be absolutely necessary, and again advised and insisted on after it had subsided, but was still refused, especially by his mother.

On January 1st, patient returned to school at Ottawa, and remained in good health until 5 p. m. January 20th, when he was taken with a severe cramp in his bowels and a free movement. Cramps then subsided, patient ate a fair supper, feeling well until one-half hour after supper, when cramps returned with increased severity, and continued, but were more in his right side.

Being suspicious of another attack, he took the 7 p. m. train for Streator. I saw him at his home at 9:30, and found him suffering very severe crampy pains in his right side, and was very tender to pressure. Temperature 99, pulse 100. Operation was strongly urged, consent was delayed until morning, trusting he would be better by that time. At 7 a. m. temperature 100, pulse 108. The tenderness had extended to the median line. Operation was consented to and performed that evening at 10:30 o'clock, about thirty hours from the beginning of the attack.

On opening the abdomen, this, creamy pus poured out freely. The appendix was found adherent to the posterior wall and contained a perforated abscess. Because of the location and adhesion it was not removed, but drained with iodoform strip tampons. Drainage was very free for two weeks, and in five weeks recovery was complete.

The operation was advised and urged, not that we knew there was an abscess or any other special danger present, but only because, having had two attacks, we feared repeated attacks, and that this one might terminate fatally, and thought it useless to take chances on it. As the patient had only been sick a few hours, we felt sure we could do an early operation, and head off bad complications, and promise a good prognosis; but was very much surprised to find such advanced pathological conditions present.

Case No. 2. Mr. G. B., age 31, an American farmer, always healthy, November 16th 1900, came in to my office on horseback, a distance of four miles, complaining of nausea and pains in his stomach and bowels. On examination he was found to be tender over McBurney's point. Pulse and temperature normal. Catarrhal appendicitis was diagnosed and treatment advised, all symptoms subsided in three days with no further troubles until January 10th. He returned to the office complaining of the same trouble, except pains and tenderness were more pronounced than before. Temperature 99, pulse 90. This attack subsided in five days, but he would have repeated attacks about

every six to eight months, but none severe enough to cause him to go to bed.

After the second attack I advised an operation, but each time he would decline, saying he would wait until the next attack, trusting he would have no more. January 29th, 1903, he was taken very sick (during the night, this being his sixth attack) with vomiting and severe pains in his stomach and bowels, the pains with tenderness became localized in his right side on the second day; temperature 101, pulse 110. Severe pains and all acute symptoms lasted four days, gradually subsiding by the tenth day; except he continued to have a temperature of 99 to 99½ for two weeks, when he was earnestly requested to have appendix removed, which he agreed to do.

On opening the abdomen, everything seemed normal except the appendix, which was three and one-half (3½) inches long, normal in appearance and size at the proximal end and for about one inch back, but the distal end was red and swollen, and ballooned out to a club shape, being about the size of the little finger. The appendix was removed in the usual way, and when split open to examine, the ballooned distal end contained about a drachm of thick creamy pus; and an ulcer about the size of a dime in the mucous lining, which had almost eaten through the entire wall, thus making it only a question of a short time until there would have been a perforation and a liberation of the pus.

Patient made a prompt recovery, left the hospital on the twelfth day.

Case 3. Mr. H. M., age 29, a healthy farmer, had never been sick. April 27th, 1899, he came to the office saying he had been having cramps in his stomach and bowels and a loss of appetite with slight nausea for two days. On examination he had a temperature of 99, pulse 86, and slight tenderness on pressure over appendix. He was advised to go home and keep quiet, and abstain from foods until all tenderness disappeared, which was in three days, after which he continued perfectly well for six months, or until the second attack.

Second Attack. October 9th. He husked corn all day, feeling well. At 4 P. M. was taken with a very severe sharp cramp in his bowels and vomiting, bowels moved three times during the next two hours. I saw him at 6 P. M. and found him walking the floor, bent over holding his hands on his abdomen, and crying out with pain. The pains were general, with no special tenderness. Temperature normal. He was given one-fourth of a grain of morphine hypodermically, and four grains of calomel by the mouth to be followed by one-half ounce of magnesium sul. in four hours. Cramps continued very severe, causing the patient to be very restless all night, in spite of two repeated one-fourth grain doses of morphine every four hours.

At 7 o'clock the next morning a high colon enema was given with no results. Cathartics and enemas were pushed vigorously during the next twenty-four hours, with no results. At 4 P. M. or twenty-four hours from the beginning the bowels were tympanitic, but no tenderness

or localized pains. Temperature 100, pulse 110. Patient resting better, but still disturbed with pains. He was given no more morphine after the first night. The following morning, or thirty-six hours from the beginning, his temperature was 101, pulse 110, bowels very tympanitic. The pains were still of a general heavy aching nature, and with no local tenderness. At 6 A. M. he had a vomiting spell which lasted about a half an hour, and vomited fecal matter, after which he felt easier the remainder of the day.

Operation was advised and done as soon as arrangements could be made, which was that evening at 10 o'clock, or about fifty hours from the beginning. At that time the bowels were very much distended. Pulse very weak and fast, patient stupid and had the appearance of a dying man.

On opening the abdomen, the small bowels were of a dark slate color and very much distended, making them very hard to keep in the abdomen while searching for the seat of trouble. The appendix was found to be very short and stubby and sloughing on the end and adherent to a kink of the small intestine by a fibrinous exudative band which bound it down producing strangulation and obstruction. The band and adhesions were removed, but the patient did not rally from the anesthesia.

From the appearance of the appendix and the bowels, it was very evident that during the first mild attack the end of the appendix had sloughed and became adherent to the neighboring bowel, and when the second attack came on, the acute congestion and swelling soon produced the strangulation, or in other words the first attack kindled the fire ready for the match of the second.

This case is cited to illustrate that a very mild attack may leave the appendix and neighboring organs seriously involved without any external evidence of its presence.

The symptoms of the first attack were so very mild and short in duration, there was some question whether or not it was really appendicitis. The patient and his family being afraid of appendicitis, asked if he should not be operated on to prevent future trouble, but as it was so mild, I did not think it necessary and advised them to wait as he might never have another attack, and if he did, he could be operated on early in the beginning of the trouble, almost as safely and thereby avoid an unnecessary operation; but to our sad disappointment the second attack started in so abruptly, and was so complicated, that it was impossible to make a diagnosis for thirty-six hours, and it was then too late to save life.

As an explanation I wish to say my excuse for giving the three doses of morphine was that the patient was so very restless and the family so alarmed, it seemed necessary and admissible to give some relief. Of recent years I have learned to consider morphine a very dangerous drug in this disease, and that it should never be given.

Case 4. The following case was operated on and reported in the October Illinois State

Medical Journal by Dr. Bayard Holmes of Chicago. (see page 471, Oct. Number.)

Mrs. S. G., age 45, a well proportioned and healthy woman, and a mother of five children. Friday noon, September 2, 1904, she felt a slight distress through her bowels; being mild she gave it no attention, and drove to Streator, a distance of six miles, and did her weeks shopping, returned home, ate a fair supper, and went to bed feeling well, except a slight distress through her bowels. About nine o'clock the pains increased, causing her to awake from sleep several times during the forepart of the night. By two o'clock A. M. they became very severe and I saw her at 3 A. M. and found her vomiting and suffering severe crampy pains all through her bowels, with slight tenderness over the region of the appendix. Temperature 99, pulse 90. An irreducible inguinal hernia was found in the right side, about the size of a walnut, but was not tender, patient said it had been there for years, and never caused her any trouble. I saw her again at 10 A. M., and found her still vomiting, and suffering severe pains. Bowels had been moved freely by calomel and an enema. Temperature 100. Local tenderness more marked and the pains were beginning to be more severe in right side.

At 1 P. M., a hard chill. 6 P. M., temperature 101, pulse 110. Pains very severe, and in right iliac region and tenderness very marked. Vomiting had ceased. Sunday 8 A. M. temperature 103, pulse 120, did not sleep any all night, pains confined to right side and groin. The region of the appendix was exceedingly tender and the right rectus muscle very tense. The hernia at this time was very tender to pressure.

Operation was advised and done that evening at 10 o'clock. As soon as the peritoneum was opened, thin creamy pus poured out. In searching for the appendix, a thick indurated mass covered with pus was found, which consisted of a tense band about the size of the index finger across the iliac region, and firmly fixed in the internal ring. By manipulations over the hernia with tension and torsion upon this band, a small omental hernia, the size of a walnut was dislodged from the sac, and was brought into the wound. It was black, hard and covered with fibrous flakes and pus. The band itself which was of attenuated and sclerotic omental tissue, was uninfected and apparently free from any inflammatory process. The band was ligated off from the general omentum, and the contents cut away. Under this was a gangrenous sloughing appendix, which was removed in the ordinary way.

On account of the extensive effusion, iodoform strip gauze tampons were packed in the iliocecal fossa, and the pelvic fossa, into which the hernia sack opened. The iliocecal fossa was drained with a tampon of plain gauze. The ends of all the strips hung out of the wound about six inches, which was left for six days, when the gauze was gradually removed and repacked until the flow of pus ceased, which was about five weeks when recovery was complete.

In Dr. Holmes' report he says the special point of interest in this case is the infection of

the omental and partially strangulated hernia from a rather distant appendicitis, and a peri-appendicular peritonitis without evidence of infection of the proximal portion of the omentum. This infection must have crept down on the omental peritoneum into the hernial sac, where it found tissue of diminished vital resistance, or it must have been carried into the sac through the parietal or through the omental lymphatics. In any case, it is very suggestive of the danger which lurks in the cyanotic tissue of a hernia, volvulus, an ovarian tumor or other isolated tissue. It further calls attention to one of the almost innumerable sources of error in diagnosis of disease in this region.

The above cases plainly illustrate that to treat a case of appendicitis medically, and to be able to say just when an operation is necessary to save life is no small task, and for that reason I never feel satisfied to trust a patient's life and my reputation to the medical treatment, unless it is a very mild attack.

According to statistics, about 93 per cent of all first attacks and 86 per cent of second attacks treated other than surgically, recover. Experience also teaches us a large per cent of first attacks, especially when there has been much evidence of inflammation, and almost all the second attacks are followed by repeated attacks of increasing severity until death or an appendectomy. When we are successful in watching our patient through an attack, we can not consider him cured until he has been operated on. Thus it does not seem to me to be a good practice to take chances on a mortality of 7 per cent in first and 20 per cent or more in repeated attacks, when surgery gives us a permanent cure with a mortality of only 1 per cent of loss.

The first and most important thing to do on being called to see a case, is to make an early diagnosis, which can usually be done during the first twenty-four hours. During the next twenty-four to thirty hours we should be able to decide as to the severity of the attack, and advise surgical measures when indicated before the patient passes into a dangerous and hopeless condition.

I like the words of Dr. Bonney, of Denver. In all cases when operation is advocated, it should be made clear, not that the operation is absolutely necessary for recovery, but that the chances for recovery are greater with than without it, and I would add the cure permanent.

In doubtful cases it must be emphasized that the dangers of the operation *per se* are practically nil and that the dangers of delay are terrible.

The discussion of Dr. Perisho's paper was taken up by Drs. Percy and Harris, Dr. Percy reporting on work done in Philadelphia, where all they do is to open and put in gauze for drainage and leave things alone.

Dr. Harris says he always removes the appendix at primary operation, if it can be found.

Dr. J. F. Percy, of Galesburg, in his paper on "The Successful Treatment of Lupus by the Hollander Apparatus; also Port Wine Marks," reported, after describing the instrument and

its use, several of the cases which he had successfully treated, all of which proved of much interest to all present.

The temperature at point of instrument is about 600° F., thus cooking the tissues. One treatment suffices in Lupus, but Port Wine Marks generally require two, three or four.

Never apply heat the second time after yellowish white line appears, as it will produce scarring. In operating about or near the nose, be sure and close nostrils, and in working about the eye lids, cover the eyes with wet cotton.

Discussion by Dr. Kaiser, who claims good results in the use of chemically pure nitric acid and without a scar.

Dr. Lochey claimed to have cured one case with 32 candle power light. Dr. C. D. Chalfant uses nitric acid or zinc.

Dr. Percy, in his closing remarks and in answer to questions, stated he made the application over sloughing and infiltrated areas and over the entire area at one sitting, which only requires a few moments. Has never tried the treatment in angiomatous growths, but used Wyeth's treatment in boiling hot water injection.

Dr. Pettit reported on the modern treatment of tuberculosis, as shown by the Ottawa Tent Colony. He claims medical treatment is nil. By the Tent treatment, which is nutrition and fresh air, with its application, he claims for incipient stages results good; for second stage, not so good; for third stage, results nil. Therefore, his suggestion to the physicians were not to send advanced cases. None only those whose digestion is good and who are able to attend to themselves.

The reports show a gain in weight from $\frac{1}{4}$ of a pound a day to as high as 1 pound a day for ten days.

Discussion by Dr. Wm. O. Ensign, who claims this is no new treatment, but rather the old treatment scientifically handled.

C. D. Chalfant, E. H. Fitzpatrick, J. D. Scouller and Bayard Holmes, who claim patients are helpless and that this is community disease, and what we need is preventative treatment, viz: Bread and Butter.

He claims the homes for the homeless and orphans are a menace to the public, being hotbeds for consumption.

The application of Dr. John Deans Scouller, Jr., of Pontiac, was read and referred to the Board of Censors.

The Board of Censors reported favorably upon the applications of Drs. William E. Ranney Smith, of Grandridge, Edward D. Kilbourn, of Ancona, and John Henry Veatch, of Cornell. The application of Dr. Veatch also included his signature to Section 3 of Article VI, of the Constitution. It was moved and carried that the report be adopted and that the Secretary cast the ballot of the Association for the three doctors as members of the Association, which he did, and they were accordingly declared elected and their names enrolled.

Dr. M. L. Harris, of Chicago, gave an exceedingly interesting paper on "The Cure of Inguinal Hernia," and illustrated the operation

in detail upon a clever device. Dr. Harris' paper will be printed in full in the March issue of the Illinois Medical Journal. It was received too late to be published in this issue. He claims it a delusion to think that direct inguinal hernia in adults can be cured by a truss. Infants may and ought to be cured by the use of the bandage, and as they grow older chances are lessened. Should never allow the Hernia to descend after having been replaced once. The risk where operations are made is $\frac{1}{2}$ of 1 per cent, while the deaths without operation are $2\frac{1}{2}$.

Dr. Harris has done away with silk and wire and uses aluminum bronzed wire.

Discussion by Drs. Holmes E. P. Cook and Harris, to close.

Inasmuch as Dr. Harris came to deliver us so excellent a paper, and without remuneration, it was unanimously moved and carried that he be made an honorary member of the Association.

Moved and carried that the Nominating Committee meet in the Phoenix Hotel at close of evening exercises.

Adjourned, to meet at 6:30 at the Masonic Hall, where a banquet, wanting in nothing, was spread by the medical profession of Pontiac for the members of the Association and invited guests, to which all present proceeded to show their sincere appreciation of by heartily partaking of the numerous courses, after which Dr. John Ross, of Pontiac, acting as toastmaster, called upon several who responded to toasts, and an enjoyable hour was thus spent.

Adjourned at 9:45.

At 9:50 p. m., in the Masonic Hall, Dr. Wm. O. Ensign, First Vice-President, called the meeting to order, and introduced E. W. Weis, who gave the President's address, "The Physician and the Medical Society," after which Dr. Weis resumed the chair and introduced Dr. Bayard Holmes, of Chicago, who gave a paper (see page 137 this Journal) which was highly appreciated, and Dr. Ensign moved a vote of thanks to Dr. Holmes, which was carried unanimously.

Adjourned, to meet at 8:30 a. m., Wednesday, Dec. 7, 1904.

Dec. 7, 1904. Meeting called to order at 8:53 a. m., by the President. The Board of Censors reported favorably upon the application of John D. Scouller, Jr., of Pontiac. Moved and carried that the Secretary be instructed to cast the ballot of the Association, which was done, and Dr. J. D. Scouller, Jr., declared a member of the Association.

Moved by Dr. Ensign, seconded by Dr. Curry, that the Secretary be instructed to notify Dr. Rohrabough and Dr. Rabe that charges of unprofessional conduct will be preferred against them and action taken at our next regular meeting. Carried.

Moved and carried, that the Board of Censors be instructed to investigate and prepare the charges against Drs. Rohrabough and Rabe, and place copies in the hands of the Secretary

in time to notify them at least three months before our next meeting.

Report of Nominating Committee.

For President, Wm. O. Ensign, Rutland.

For First Vice-President, J. J. Pearson, Pontiac.

For Second Vice-President, E. P. Cook, Mendota.

For Secretary and Treasurer, Geo. A. Dicus, Streator.

Board of Censors—F. A. Turner, Sandwich, chairman; J. A. Marshall, Pontiac; J. M. Kaiser, Somonauk; J. I. Knoblanck, Metamora; Roy Sexton, Streator, Ill.

Committee on Necrology and Biology—P. M. Bourke, LaSalle; E. B. Owens, Dixon; Jos. Tweddele, Washburn; J. F. Dicus, Streator; E. W. Weis.

Place of meeting to be selected by secretary.

Moved and carried report be adopted as above.

The secretary reported Drs. John C. Corbus, Jr., of Mendota; John R. Hoffman, of 206 Washington st., Chicago; John J. Hammond, of Malden; James A. Kleinsmid, of Lay Grove; Wm. C. Mason, of Walnut; Chas. A. Palmer, of Princeton; Vern A. Peterson, of Arlington; E. E. Rohrabough, of Chicago and Solomon C. White, of Somonauk, as being delinquent on dues for five consecutive years and according to article 6, section 4, should be dropped. It was moved and carried that the secretary be instructed to drop the names from the roll.

The applications of Drs. Norman Pearson, of Pontiac and Michael M. Welsh, of Odell, were received, read and referred to Board of Censors, who reported favorably. Report adopted and secretary cast the ballot of the association and Drs. Pearson and Welsh were declared elected.

Dr. Murphy of Dixon read a paper on **Treatment of Eclampsia**. To produce catharsis comp po. jalap 3j if patient is conscious, otherwise 3 or 4 drops of croton oil on base of tongue and repeat in 8 hours if necessary.

Surgical anaesthesia and delivers at earliest possible moment. Discussion by Drs. John Ross who prefers $\frac{1}{8}$ gr. elaterine every half hour until free evacuation, to croton oil. Pearson, Colbourne, Turner, Curry, Ensign and Murphy to close.

Moved and carried that any visiting physicians be invited to take part in discussion of papers.

Dr. Colbourne read a paper on **Rheumatism**.

Moved and carried that all papers be read and discussion postponed until close.

Dr. Curry read a paper on **Treatment of Compound Fractures**.

Moved and carried that the paper of Dr. Hendrichs on the **Medical Value of Drugs** which had been sent to the secretary, be read by him in abstract, which was done.

The discussion of the three papers, viz.: of Drs. Colbourne, Curry and Hendrichs was then discussed by Drs. Fitzgerald, Weiss (who claims results can be had from salicylates if you use Merk's preparations and podophyllin for cathartic). Ensign, Colbourne and Curry to close.

The secretary reported in his hands a paper from Dr. Rabe, which the president refused to consider and it was passed.

The following resolution by Dr. Ensign was presented and unanimously adopted:

Resolved, That the members of the North Central Illinois Medical Association assembled in its thirty-first annual meeting at Pontiac, Illinois, December 6th and 7th, 1904, do most sincerely extend their thanks to the members of the medical profession of the city named and of Livingston County for their hospitable entertainment so generously provided for the occasion; that to the citizens of Pontiac, its public press and the city officials who have contributed their presence, their influence and a pleasant and agreeable place of meeting, they would give assurances of their hearty appreciation, and that the visiting profession will carry with them to their towns most happy recollections of the cordial hospitality of their generous hosts, who have so unitedly and successfully contributed to the welfare of their visitors and a profitable meeting of the association.

Dr. Ensign moved that the secretary place \$300.00 in bank security at best rate of interest he can obtain. Carried. Dr. Ensign asked for an expression from the association in regard to this journal being moved to Chicago. After some discussion Dr. John Ross presented the following resolution which was unanimously adopted.

Be it Resolved, That the members of the North Central Illinois Medical Association are satisfied with the present management of the Illinois State Medical Journal.

Moved and carried that the secretary be instructed to place a copy of this resolution in the hands of the State Secretary in time for his use at the next meeting of the council.

Dr. Ensign moved a vote of thanks to Dr. Weis for the able way in which he had conducted the business of the association, etc., during his term of office. Carried.

This now completing the program, all having responded but Drs. Hirsch, of LaSalle; Pike, of Ottawa and Flint, of Princeton who were not present neither tendered any excuse.

Drs. Ross and Marshall were asked by the retiring president to conduct the president-elect, Dr. Wm. O. Ensign, of Rutland to the chair.

After some brief remarks the association adjourned to meet December 5 and 6, 1905.

Geo. A. Dicus, Secretary.

Abstract.

Dr. Percy, of Galesburg, read a paper in which he detailed his experiences with the **Hollander Supra Heated Air Apparatus**, in the treatment of **Lupus and Port Wine Marks**.

The doctor first spoke of the difficulties of permanently curing Lupus, and especially so from the use of pyrogallie and nitric acids. That the results from these agents was rarely permanent.

The X-Ray was spoken of, and commended as of value; but the time required made it very tedious as well as expensive, and unfortunately the results were not uniform.

In the International Clinics of a few years ago, Hollander of Berlin, gives his method of curing lupus by the use of a modified Bunsen Burner, from which air at a temperature of about 600° F. is sprayed all over the infected tissues. The patient is anesthetized with chloroform, and the air applied with the nozzle of the apparatus held about half to one inch from the surface. A Pacquelin cautery bulb is used to force the air from the hot air apparatus. It is played upon the parts involved until they turn a sickly yellow. When the alae of the nose is involved, the nostrils are gently closed with an instrument forceps, such as is used to remove instruments from boiling water. When the eyelids are to be treated, their margins are held together by moistened and pressed cotton held down by the instrument forceps. No harm has come from treatments applied about the eyelids in this way. The author of the paper had had the same excellent results as those reported by Hollander. The great advantage of the treatment was that it rarely had to be applied more than once, unless the case was a very extensive one. This was of the greatest advantage, and the results were almost certain to be permanent, something that could not be urged as true of any other method. The doctor then reported five cases, in all of which the results were ideal.

A report was then made of the use of this treatment in the destruction of port wine marks, and photographs of cases treated, shown. In this latter class of cases, the treatment had to be repeated often four or five times; but after each application, the fading out of the stain was pronounced. In the angiomaticous form of naevus, the treatment was not applicable. The after treatment in both conditions, was that of a burn of the first degree.

In the discussion that followed the reading of the doctor's paper, the question was asked if the treatment was applied to sloughing areas of lupus. This was answered in the affirmative as was also the question as to whether the whole surface involved was treated by the application of the supra-heated air.

BRAINERD DISTRICT MEDICAL SOCIETY.

The Brainerd District Medical Society held its 111th meeting in the parlors of the Commercial hotel, at Mason City, October 27, 1904, with President Irving Newcomer of Petersburg, in the chair.

The following applications were read and applicants taken into full membership: A. L. Cook, M. D., Mason City; H. M. Van Hook, M. D., Mt. Pulaski; W. S. Taylor, M. D., Tallula; John Deal, M. D., Riverton; J. H. Hill, M. D., Mechanicsburg; B. F. Stults, M. D., New Holland; Edwin A. Weimer, M. D., Pekin; W. E. Guthrie, Bloomington; J. W. Fulwiler, M. D., Bloomington; H. W. Elder, M. D., Bloomington; C. M. Noble, M. D., Bloomington; R. A. Noble, M. D., Bloomington; A. W. Meyer, M. D., Bloomington; C. E. Chapman, Bloomington; J. E. Kunkler, M. D., Bloomington; Lee Smith, M. D., Bloomington.

ton; O. M. Rhodes, M. D., Bloomington; T. W. Bath, M. D., Bloomington; J. B. Taylor, M. D., Bloomington.

Upon the unanimous vote of the society article XII of the Constitution became section 17 of the By-Laws.

An amendment to the Constitution providing for a Board of Trustees was unanimously adopted.

Upon motion Irving Newcomer of Petersburg was instructed to secure a marker for Dr. Harris grave, the marker not to exceed \$15.00.

The society unanimously endorsed the action of the Illinois State Board of Health in the crusade against consumption.

At the afternoon session, B. W. Hole of Tallula, gave a very interesting paper on **A Case of Fracture of Eleventh and Twelfth Dorsal Vertebra**, which is as follows:

Fracture of the Dorsal Vertebrae.

Berton W. Hole, M. D., Tallula: Fracture of the spine in the dorsal region is of rare occurrence, about three and one-half per cent of all fractures.

Fracture of the cervical and dorsal region are of equal frequency. When the cervical region is so injured the prognosis is more grave than injury in the dorsal region.

The lumbar region is least frequently so injured and the percentage of recoveries is greater.

For purposes of diagnosis and prognosis, McDonald divides the spine into five sections from below upward.

First: The three lower lumbar vertebrae, injury to which is not common and recovery the rule.

Second: That part between the second lumbar and tenth dorsal, in injury to this portion of the spine the lumbar and sacral plexus of nerves is involved, with a paralysis of the lower extremities, bowels and bladder, and bed sores are an early and inevitable result.

Third: That portion between the tenth dorsal and seventh cervical, when the injury is in this region, there is paralysis of the abdominal muscles, labored respiratory movements, and pneumonia and hypostatic congestion are frequent complications.

Fourth: The third, fourth, fifth, sixth and seventh cervical vertebrae; following such injury the whole of the brachial plexus is involved, with complete paralysis of the arms, the breathing is much interfered with especially the expiratory act, voice weak, or lost altogether, temperature may be abnormally high; the fifth and sixth vertebrae are the ones in this region most usually injured.

Fifth: The atlas and axis, fracture of either of these is almost surely fatal, patient may live from a few hours to two weeks.

The mortality in civil practice of all cases of injury to the spine, fracture or dislocation, or both, is seventy-eight per cent.

The causes of the injury, especially in the dorsal region, are first forcible flexion; the head and shoulders being forced forward on the hips or vice versa. Second falls from almost any height when patient falls on head or feet. Third direct injury, as a blow with some heavy object, gun shot wounds, etc.

Diagnosis. The diagnosis is as a rule easy, as there is in the majority of cases some deformity of the spine at the point of injury. When there is no deformity, the diagnosis is to be made by carefully mapping out the area of motor paralysis and tracing the nerves that supply the paralyzed region to the spine, thus locating the point of injury.

Prognosis: The prognosis is always grave and should be guarded, even in the apparently most favorable cases.

Treatment: The treatment as laid down by different authorities, differs very materially, with a very few exceptions the writers advise, an expectant plan of treatment, and advise postponing operative procedure for a longer or shorter time, to see if nature will not establish a part at least of the lost function. There are a few surgeons however that advise an immediate operation, a removal of the laminae of the fractured or dislocated vertebrae, thus relieving at once the pressure on the cord. Among this number Dr. Paul F. Eve, of Nashville, Tenn., Dr. John C. Munro of Boston, and Dr. Carl E. Black of Jacksonville, Ill., who has tabulated a great number of cases besides the ones in his own practice, and I think shows conclusively that the operative treatment, done as soon as possible greatly enhances the chances of life and permanent recovery. When the patient so injured is first seen a small amount of manipulative procedure is justifiable, the shoulders being fixed traction on the legs at the same time some pressure at the point of injury; it is well to warn the family and friends before instituting any procedure that the patient might suddenly die during or after the manipulation. After the operation patient should be placed in a plaster cast, on an incline, some advise swinging the patient from the shoulders, thus preventing pressure on the bony prominences, and lessening the probability of bed sores.

The case I have to report, is of fracture of the eleventh and twelfth dorsal vertebrae, involving the laminae and probably not the bodies of the vertebrae, in one-half the cases of spinal fracture the bodies of the vertebrae are not injured.

This injury according to McDonald is in the location second in frequency of injury, and third in mortality and that two-thirds of the fatal cases die during the first month.

The patient was a male twenty-two years of age, five feet eight inches in height, weighing about one hundred fifty pounds; not an ounce of surplus flesh, and perfectly developed muscularly accustomed to hard labor each day on the farm.

The personal and family history was the best.

June fourth while in a tree, probably twenty feet from the ground, he lost his balance and fell, as there were no bruises about the body any place, we judge he must have fallen on his feet; he was picked up in a few minutes in an unconscious condition, from which he rallied in a short time, and as he had no use of his

legs at all, the word that came to me was that both of his legs were broken.

I saw him about two hours after the accident, he was conscious but rather stupid, pulse 80, respiration 15, temperature normal; complained of pain in his back that was his only complaint. There had been a little nausea, the pupils were normal, and reacted normally to light, the abdominal muscles were rigid, apparently in a state of tonic contraction. There was complete paralysis, both sensory and motor, of all the body below a line drawn from the eleventh dorsal vertebrae both sides to the anterior superior spinous processes of the ilium, then across the abdomen, there was an abolition of all reflexes.

The deformity at the point of injury was as if one vertebrae had been pushed forward and allowed the spine of the beneath it to project one-third of an inch or more, the point of injury was painful to the touch.

A catheter was passed, but no urine obtained; very little treatment was instituted at this visit. I made a little traction on the legs, the shoulders being held by an assistant, he was then put to bed on a slight incline and the attendant was instructed to pull him up in bed by the shoulders occasionally.

The next day I took Dr. Taylor of Tallula with me, and we did a little more traction and manipulating hoping to be able to reduce the, then supposed, dislocation, but to no purpose; the area of paralysis was remapped and found to be as above stated, there was at this time no urine found in the bladder and of course no bowel action.

The patient was placed on a well padded inclined bed and the shoulders fixed, but the fixing of the shoulders proved to be so uncomfortable that he was released the next day.

We used all means possible to prevent pressure on the bony prominences, and thus prevent the formation of bed sores.

The third day there was about a pint of urine passed on the insertion of the catheter; the catheter was directed used every four hours under the strictest possible antiseptic precautions, and cathartics were given. For the first three or four days there was a slight rise in temperature, and the pulse was about one hundred, after that the temperature became normal, and the pulse was about sixty until the beginning of the fifth week after the occurrence of the injury, when it increased in rate, the respiration during the above period averaged about fifteen to the minute.

The fifth day there was noticed in the lumbar region the first appearance of a bed sore, skin dark about three or four inches in area, and in four days more there had formed a gangrenous slough four inches in diameter, the peculiar thing to me was the almost malignant rapidity of the formation of the bed sore, and its involvement of the deeper structures so soon.

At this time began to insist on operation, and finally got the consent of the patient and family to have a laminectomy if it could be done at the home of the patient, accordingly arrangements were made with Dr. C. E. Black

of Jacksonville, and on June 14th, ten days after the inception of the injury a laminectomy of the eleventh and twelfth dorsal vertebrae was done, there was several pieces of bone removed and the entire transverse processes of the above mentioned vertebrae, the patient was placed in a plaster cast and in the bed on an incline.

The muscles of the legs were already much atrophied, and flabby; the sore in the lumbar region had cast off its slough and exposed the spinal and gluteal muscles.

The pressure on the cord was by the operation entirely relieved, the dura was not opened, the operation wound healed promptly by first intention.

For four weeks after the operation there was an entire cessation of any aggravation of any of the symptoms, and it really looked as if there was some improvement, the line of anasthesia was a little lower down on the abdomen, but never at any time was there any control over the sphincters, or any knowledge of the action of the bowels or bladder; but the appetite and digestion was good and the patient cheerful the second week after operation was moved three miles from his home to that of his brother, without any inconvenience or suffering.

At the beginning of the fifth week all the symptoms became aggravated, the sore in the lumbar region became active again involving the spinal and gluteal muscles, baring the spines of the lumbar vertebrae. August second, fifty-nine days after the occurrence of the injury, the patient died from exhaustion and septic infection from the bed sore and a cystitis.

My reasons for bringing this case before the society, are, first, on account of the rare occurrence of such an injury, second because any practitioner may at any time be called upon to treat just such an injury, and as there is so much difference of opinion as to treatment, if one takes the advice which he will get a preponderance of from his text books he will delay operation until the complications arising will destroy his patient, and counteract all the good that an operation can do and studying this case as I had the opportunity of doing, I believe that an operation the second day instead of the tenth would have greatly enhanced the prospects of recovery, and I believe the history of the case after the operation justifies me in that belief, so in all cases of injury to the spine, unless the injury be very trivial indeed, it is our duty to insist on immediate operation, before the atrophy of the muscles, the further loss of function of the cord from disuse as well as the pressure the formation of bed sores, and an almost inevitable cystitis tends to complicate the case and hasten the destruction of the patient.

The following is a very concise and instructive paper on *The Mongolian Idiot*, presented by C. R. Spicer of Springfield:

The Mongolian Idiot.

C. R. Spicer, M. D., Springfield: This subject has been chosen, not because of its importance in every day practice, but because, oc-

curing rarely, it is likely to be unrecognized if the examiner's attention has not been especially called to it.

On the other hand it is so plain and characteristic that once seen it is never to be forgotten.

Generally speaking, imbecility in infancy and early childhood is very puzzling and difficult to classify; but this class is quite distinct.

This class of idiots is not really so small; but comparatively little has been written on the subject because the condition has not been recognized until recent years. In his edition of 1895 Rotch does not mention the subject nor does Holt in his of 1900. It is not so rare in Europe, however, as Shuttleworth states that this class forms five per cent of all imbeciles. I have notes on twenty-three cases observed in the hospitals of Edinburg, London and Vienna and one, from which the accompanying photograph was taken, which occurred in the practice of Dr. Hopkins of Springfield. This child was born at term and was the youngest of five all of which were normally bright. The parents were German and not related before marriage. The mother's health was good during the puerperium. The case was typical and so well represents the class as to need no special description. Unfortunately no photograph was taken for clinical purposes, the present one failing to show the characteristic flat occiput and spade-like hands. The child died of diffuse bronchitis when one year old.

The term Mongolian does not imply that these individuals are more common among the Mongolian race; in fact it has been shown not to be so, but to the marked resemblance in appearance. This resemblance is chiefly in the shape of the head and oblique position of the eyes.

These children present a very striking and odd appearance. The head and all the features are more rounded than usual.

Instead of the ordinary occipital protuberance the back of the head is nearly vertical, making the occipito-frontal diameter abnormally short while the temporal diameter is relatively long. The hair is scanty, straight and fine.

The skin is of a clear pink and the cheeks red. The eyes are characteristic, the palpebral fissure being oblique and with a reduplication of the epicanthic fold. The bridge of the nose is depressed, the child snuffling more or less and breathing through the mouth. Adenoids were present in 35% of the cases observed. The tongue is abnormally large and usually protrudes and in early childhood becomes fissured, presenting a hacked appearance. Thompson, of Edinburg, found this condition present in eleven consecutive cases over four years of age, but has not seen it under two. The vault of the mouth is usually high. The bones are relatively small and the joints lax so that the foot can readily be placed behind the head. The hand is short and spadelike, the little finger being relatively short and sharply curved toward the ring-finger.

Development is much retarded in these cases, a child of a year often appearing not more than eight months. Dentition is delayed, the teeth

often not erupting before the third or four year. The voice is guttural and indistinct. These children show many peculiar traits and interesting dispositions. They are affectionate and jealous, their jealousy sometimes rendering them unsafe companions for other children. Otherwise they are cheerful and goodnatured and they are usually clean in their habits. They are fond of music and take an interest in toys, domestic animals and such things as interest normal children.

In the two postmortems which I have seen on Mongol imbeciles the medulla was small and the cerebellum quite small, the cerebral convolutions in both instances being apparently normal. In one the vomer protruded into the nasopharynx. The apices of the lungs of one of the bodies were pneumonic, the bronchial glands were large and caseated, and the base of the brain studded with tubercles. In examining the records in five autopsies on Mongols, Muir of Edinburg found the medulla and cerebellum undersized in three, while the others were apparently normal. The blood count in three cases showed nothing unusual.

The etiology in this class of imbeciles is by no means clear. Heredity seems to play no part whatever. I know of but one instance where they were related. They were brothers. They often occur at the end of a large family or near the menopause. That this fact plays a very important part in the etiology is doubtful, for they are often the first child and the mother young. Of the twenty-three observed five were from the seventh to the thirteenth child in the family while nine were from the first to the third. In nine cases the mother was from thirty-eight to forty-eight years old and in one instance the father was twenty-four and the mother forty-three. In several instances the child was the youngest in the family by several years. Only two had a specific history and in no case were the parents related before marriage.

The diagnosis of this type of idiocy is very easy. Dr. Hopkins recognized his case from a description I had given him of the class. The only condition for which it is likely to be mistaken is cretinism. They have the following points in common: they are both short in stature, backward in development and dentition, hair straight and scant, have large tongues which protrude, short thick hands, depressed noses and are both lowtyped idiots.

They differ in that the Mongol's palpebral fissures slant, he has reduplicated epicanthic folds, has red cheeks short fingers which taper to a point, back of head straight, while large over vortex, hair fine and silky, has no fat pads and is lively and cheerful in disposition; while the cretins eyes are horizontal, no reduplication of epicanthic folds, cheeks pale, head large behind, hair coarse, fingers square at ends, pads of fat often present and they are often stupid and morose.

Intellectually Mongols are very near the bottom of the scale. They often do not sit alone before a year nor walk until from two to four. Some never learn to recognize the mother.

while others never learn to talk. They are very imitative and like to mimic older persons. They are helpful and like to do errands, taking great pride in their attainments.

Mongols are short lived. Of the twenty-three observed the oldest was eleven, while nineteen were under six. They are sensitive to atmospheric changes and very prone to lung trouble, especially tuberculosis and pneumonia. Those

surviving usually become fat at puberty. In such thyroid is useful. Poynton, of London, has seen general improvement in the continued use of it, but the gain must be very slight for one of his cases four years old, that had been under treatment for a year, could barely walk and could say but a single word.

After the report of several very interesting cases the society adjourned to meet January 26, 1905, at Petersburg.

TENT LIFE FOR HEALTH SEEKERS UNDER CHRISTIAN AUSPICES AND SANITARY ENVIRONMENT.

Health Farm of Young Men's Christian Association, Denver, Colorado.

W. H. Watterson, M. D., Associate Medical Director, Edgewater, Colorado, formerly of Chicago:

For years the pure dry air, stimulation of altitude and penetrating sunshine of Colorado have attracted the consumptive, because these factors invite to outdoor life. The question

"ranch it," or anything but rest. Reaching Denver, they attire themselves as cowboys, and with broncho saddle and spurs ride out to explore the unknown regions of the Rockies, or even see the Pacific, in the least possible time. Again, they may reach Denver having spent their last cent on their railway fare, and are compelled to work when rest is most essential. These things have been going on for many years, until Dr. B. P. Anderson of Colorado



Farm Opened May 21, 1903—Nine Tents Occupied.

naturally arises, why do we see so many failures in the cases coming?

Firstly, because of the medical directions given.

Secondly, because of the imprudence of the invalid.

Thirdly, because of the lack of the necessary financial aid to enable him to take the proper rest and food with the open air treatment.

We are daily receiving letters from invalids in the lower altitudes, asking us to take them here as patients, and stating that they are unable to work where they are, but are sure they could work here, and thus pay their way. It is for the eastern physician to help us along these lines. A man who cannot work because of weakness in a lower altitude surely must be told that with the increased efforts he must put forth in a higher altitude he cannot work for even a much longer time than he might in a lower altitude. Many of our patients come with the advice from friends, or even their physician, to "rough it," "breathe deeply," "take plenty of exercise," "work on a farm,"

Springs, who has watched these cases for some time, makes this bold assertion:

"I have seen, during my residence in Colorado, very nearly as many cases of phthisis which we would designate curable fail of recovery simply from imprudence in the mode of exercise, and indiscretion in the manner of living, as those cases of extensive lesion which render recovery absolutely impossible, and which are termed incurable."

So many phthisical young men come into the rooms of the Y. M. C. A. at Denver that they were referred to by the business men as "Denver's burden." What could the Association advise other than to go to rooms and boarding places in Denver—a city I consider most dangerous for a consumptive to inhabit because, firstly, it is a city, dusty and smoky, as are other cities, there being even less wind than in lower altitudes. Secondly, a large percentage of the inhabitants are consumptives, who expectorate where they please, thus making it a most suitable place for re-infection. Thirdly, association with the many hopeless cases is conducive to mental depression.

Fourthly, the saloons, houses of ill fame and such places make these men most welcome as long as their money lasts.

With these facts and problems at hand, the Young Men's Christian Association, assisted by the business men of Denver, tried to help to handle "Denver's burden." A most philanthropic gentleman gave to the Association a beautiful farm five miles north-west of Denver, and on this the Association built the "White City," and started the open air treatment of tuberculosis, as their part in dealing with these young men.

The farm is on a plateau overlooking Denver, and has 100 miles of the Rockies in view. There are thirty-three acres of orchard and garden, all of which is under irrigation, except about the tents, and is hedged by rows of high trees on the north and west, which give protection not only to the fine orchard, but also to the tents. Drinking and bathing water is supplied from a 60 feet deep artesian well. There are now forty-five tents in service, and more could be filled were it not for the limited

wall of the tent, and which may be raised at various angles as awnings, or removed entirely, which, together with the screen door, makes it possible to sun out the south or front side of the tent in a perfect manner. Third, by means of the side wall ventilation, six inches above the floor, consisting of a hinged width of the drop-siding opening downward, while in a corresponding position on the inside wall of the tent another wider board is hinged downward, but so regulated as to be opened at any desired angle, thus at once controlling the inlet of fresh air. By means of this series of ventilation the tent is hygienically constructed, for no draughts are encountered, and the problem is solved of removing at once, through the roof and fly ventilator, the vitiated air as it comes from the occupant, while the pure air constantly enters at the bottom of the tent. All canvas used is twelve ounce army duck.

A man wishing to become a resident at the Farm applies through the Denver Y. M. C. A. His application must be accompanied by a physician's certificate as to his condition.



Water Tower Observatory Finished September 1, 1903—Thirty Tents Occupied.

dining room. Various types of tents were tried, until the following described tent was found most efficient, and is now adopted:

The frame is made of selected Oregon surfaced lumber. The four sides of the tent are boarded up thirty-two inches with three-quarter inch Mexican clear drop-siding, while the floor is made of Texas quarter-sawed pine. A four panel door (special hand-made screen door), and two six-light windows are provided with each tent. All window openings and ventilating apparatus are covered with fly wire screening, which, together with the screen door, makes the tent insect proof. The fly extends one foot over edges of the tent, is ten inches above the parallel to the roof, thus allowing free circulation of the air all over the roof of the tent. The fly is finished on the edge with a six-inch scalloped and bound curtain, which gives a beautiful and uniform exterior to the tent. The special features consist in the hygienic ventilation: first, by means of the cupola or combination roof and fly ventilator, with regulator attachments, placed in the center of the top of the tent. Second, by means of two awning frames, which make up the front

From this we advise, whether or not to come to Denver. If advised to come, he is asked to report at Y. M. C. A. on his arrival. He is then sent to the examining physician, who passes on his condition and decides whether he is a fit patient for the Health Farm, only incipient cases being taken. If reported a favorable case to live at the Farm, he is put on the waiting list, and in turn of vacancies of tents is received. On arriving at the Farm, one of the resident physicians takes the patient in hand, and emphatically impresses on his mind the following laws and advices:

1. Makes a business of getting well while here. If you have some other business, not only the business but your health will fail.
2. Expecterating anywhere on or near the grounds, or anywhere other than in the sputum cups furnished, is a cause for immediate expulsion, this because infection occurs through the sputum, especially when voided by a consumptive upon the floor, ground or handkerchief, where it dries and becomes disseminated as dust, and is again re-inhaled, infecting the undiseased lung or part of lung.
3. That rest is as essential to the healing

of a wounded lung as to any wound on any part of the body, and that even deep breathing should be abandoned and the cough suppressed as much as possible.

4. Comparative rest should be observed until all organs over-stimulated by the high altitude compensate.

5. One must be in the open air all the time. Sleeping in a tent with doors, ventilators and windows open is the best, and one will not catch cold if properly clothed.

6. One should not even be in his tent on fine days, but be out on the lawns in chairs, and in the sunshine when it is not too hot, as in July and August.

7. Stripping to the waist, and taking a sun bath, followed by a rub down, is good to harden one.

8. The least amount of artificial heat in the tents the better, but make up by sunshine and plenty of clothing.

9. Bathing and other hygienic life is important.

Each patient is required to attend to his

but any patient so desiring may have milk or raw eggs between meals. Of course we must diet some cases. Rest or exercise depend on the following:

1. Temperature. Complete rest in bed when 100 F.

2. Pulse. Complete rest in bed when high.

3. Hemorrhages. Complete rest in bed for a week to ten days.

4. Weight. Comparative rest until weight begins to increase, then very gradually, allowing more exercise, and watching results.

5. Graduated exercise after weight has reached normal, and other symptoms quieting.

As to the kind of exercise, we find walking most satisfactory. Box ball is also indulged in without apparent injury, and light farm work is done by many of the patients.

Those who feel the life in one camp monotonous are sent to another camp for a time. We have found the change very helpful, and a case not improving here often picks up in weight thereby.

There is free telephone communication with Denver, and the street cars run one and three-



May 21, 1904.—Forty-two Tents Occupied.

own tent and bed, except so far as scrubbing and disinfecting are concerned. On a tent being vacated, it is well cleaned, bedding and rugs sterilized and tent closed up tightly and fumigated with formaldehyde, after which it is opened, well aired and sunned before being occupied again. All the tents are lighted by electricity, and the Assembly Tent, as well as five infirmary tents and two floors of the Observation Tower, are heated by steam. The other tents are not heated, the patients making up by plenty of bedding, tact in dressing and undressing, and a hot brick on retiring. We find our men cough least and improve most during the winter months. Our dining room in the brick structure seats 45. It is heated by steam, but has a fire-place, and is well ventilated. However, the heat of this room is never above 65 Fahr. Our diet is of all ordinary food, with plenty of milk, cream, fresh eggs and good meat. Fruit is in abundance, winter and summer. We have not as yet had to advise our patients to eat plenty; rather have we had to recommend them to curb their appetites after the first few days here, and for the following month or two. Three meals a day are served,

quarter miles from the camp. However, trips to Denver by residents are discouraged.

I tabulate below some facts as to our results, which are based on a record of those spending at least one month on the Farm:

Number of patients admitted to Farm since its opening, May 1, 1903.....	146
Number of men who have left and subsequently returned	8
Number of residents now here.....	43
Number of men who have left to take up positions	41
Number we know are still working.....	47
Number lost track of.....	3
Number sent home, in good condition.....	12
Number sent home in bad condition.....	7
Number left to reside with friends.....	2
Number left to winter in warmer climate...	2
Number left to live in town.....	16
Number left for our camp at Crestone, Colorado	18
Number dismissed for insubordination.....	2
Number sent to hospital.....	5
Number who died	4
Number now working on Farm.....	10
86% of the men were benefited.	

25% of the men on Farm make their expenses or more.

16% were sent to our camp at Crestone, where they can make part of their expenses.

Of the last 70 patients to come here, five were physicians, two medical students and one dentist, thus making about 6% of the medical profession.

I will describe my own case, because it is typical of those coming here. I came to Colorado last June, having been losing weight for the previous four months at the rate of five pounds per month. In May, tubercle bacilli were found in my sputum. On arriving at the Health Farm on June 25th, my weight was 131 pounds. I very easily became tired and breathless, and had an evening temperature ranging from 101 to 103. I was compelled to remain in bed most of the time for three weeks, during which time my pulse went up to 140 on the least exertion, and there was some weakening of the right heart, and as a result some pulmonary congestion. However, my appetite was good, and I gained at the rate of 2 pounds per week. At the end of three days night sweats, which had been persisting for over a month, stopped, the temperature decreased slowly. My appetite grew from the time I arrived. I ate plenty of wholesome food, but no raw eggs (though I took a few soft boiled ones), and from 2 to 3 quarts of milk daily. At the end of six weeks I had gained 10 pounds, and felt so well that I insisted on taking some exercise, and accordingly went to work in the garden for two hours on two consecutive mornings. The result was a set-back, loss of four pounds in weight, return of temperature, and also loss of strength. It took me six or more weeks to regain this loss. Since then I have been gaining steadily, till I now have my normal weight of 151 pounds. I am gradually taking more exercise, and find it does not hurt me. My cough is very slight now, and I anticipate clinical recovery by Spring. My case is but a fair sample of all others here.

To sum up, it will be seen that our camp is not a sanitarium or hospital, but a place where the consumptive is trained to care for himself, so that he may be again a breadwinner. While training him along those lines it is our aim to build up his system and vitality, so that he may have a good start when he goes out again to earn his living.

Marriages and Deaths.

Marriages.

Edward Jenner Barrett, M. D., Chicago, to Miss Julia Dennett, of Sheboygan, Wis., Jan. 11.

Lynn Moore Barnes, M. D., to Miss Donna Ullery Buckingham, both of Decatur, Ill., Jan. 10.

Geo. S. Edmonson, M. D., of Clinton, and Miss Della Jones, of Thawville, January 4.

John K. Jamison, M. D., Chicago, to Miss Ethel Gibson, Waukesha, Wis., January 19.

F. C. Knight, M. D., Waukegan, to Mrs. Mary Holman, Chicago, January 25.

Deaths.

Herrman, Christian A., Chicago, January 22, aged 59 years, a graduate of Hahnemann Medical College of Chicago, 1894.

Bird, A. M., Mason City, January 25, aged 62. Dr. Bird had practiced medicine in Mason City for 30 years. His death was due to paralysis.

Diffenbacher, P. L., M. D., Havana, Jan. 29, aged 78. Dr. Diffenbacher was a veteran of the Civil war and a prominent practitioner of Havana for forty years. He was President of the Mason County Medical Society at the time of his death.

Haynes, Thomas Baxter, Hurricane, Montgomery County, Jan. 28, aged 78. Dr. Haynes was President of the County Society at the time of his death.

Bernreuter, E. D., M. D., Mt. Olive, Dev. 9, aged 46.

Blinn, Odelia, M. D., Chicago, Jan. 20, aged 60.

Norred, Chas. H., M. D., Minneapolis, formerly of Lincoln, Ill., Jan. 11, aged 62.

Johns, Dr. T. M., Taylorville, Jan. 12, age 50. Dr. Johns graduated from Rush Medical College in 1877, and had practiced in Taylorville since 1877. He leaves a wife and five children.

Ensminger, Dr. Wm. H., Chicago, died suddenly of apoplexy, Jan. 17, at his residence, 4801 Champlain avenue. His age was 62. He was a veteran of the Civil war, a Knight Templar and a thirty-second degree Mason.

McFarland, Dr. Geo. C., Jacksonville, Jan. 15, age 65. He was born in Concord, N. H., and was a son of Dr. Andrew McFarland, for many years superintendent of the Central Insane Hospital, and later founder of Oak Lawn Retreat.

Hunter, Warren, M. D., Medical School of Maine, at Bowdoin College, Brunswick, 1860, physician of Rock Island County for six years, assistant surgeon of the One Hundred and Sixteenth Maine Volunteer Infantry during the Civil War, died at his home in Oneida, Ill., Jan. 6, from uremia, aged 72.

Harris, Joanis Orlando, M. D., Geneva, N. Y. Medical College, 1851, assistant surgeon of the Fifty-third and One Hundred and Thirty-eighth Illinois Volunteer Infantry in the Civil War, died at his home in Ottawa, Ill., Jan. 10, from pneumonia, after an illness of one day, aged 76.

Anderson, Axel M., M. D., Cincinnati, 1899, of Erie, Pa., died recently in Chicago, and was buried in Jamestown, N. Y., Dec. 28.

Matthew, Levi, M. D., College of Physicians and Surgeons of Chicago, 1883, who recently moved to Chicago from St. Anne, Ill., died at his home from paralysis, Dec. 11, after an illness of a year, aged 54.

Penwell, Enos, M. D., Indiana Medical College, La Porte, Ind., 1848, for more than half a century a practitioner of Shelbyville, Ill., died at his home in that city, Dec. 24, aged 83.

Beebe, Ellen O., M. D., Illinois, 1879, was found dead in her apartments in Chicago, Dec. 30, from exposure, aged 55.

New Incorporations.

The Secretary of State at Springfield has granted licenses to corporations as follows:

Continental Sick Benefit and Burial association, Chicago; benevolent; incorporators, James B. Collins, A. J. Russell, Oscar E. Florin.

The Chicago Sanitary Street Flushing Machine company, Chicago; capital, \$100,000; clean streets; incorporators, Christopher Murphy, A. J. Fisher, and Thomas S. Hogan.

Bethlehem Creche, Chicago; charitable; incorporators, Mary Wells Noyes, Mrs. J. Burnett and Jennie G. Heath.

National Curative association, Chicago, operate a sanitarium; B. W. Willard, V. R. Bucklin.

The Polyclinic Society of Chicago; educational; incorporators, David Beaton, Jean Sherwood, Mary Holabird.

News Items.

G. A. Harper, Called Into a Justice Court Severely Criticises Attorney Warwick A. Shaw.

G. A. Harper of the Harper Remedy company, 167 Dearborn street, Chicago, said things recently about Warwick A. Shaw, attorney for the State Board of Health, because the lawyer had caused him to be summoned before Justice Cochrane, charged with practicing medicine without a license.

"It's all a mistake," said the attorney, when he saw Harper. "You are all right. The constable must have got the wrong man. The case is dismissed."

That didn't satisfy Harper. He objected to being summoned with unlicensed physicians and charged the lawyer with being actuated by mercenary motives. Shaw said he was sorry, and let it go at that.

Harper said it was not the first time he had been bothered by Shaw. He said he was prosecuted in 1902 by the state board's attorney on a similar charge. "On that occasion," he says, "I did not appear before the justice and a judgment of \$100 was entered against me. Attorney Shaw settled with me for \$30 and I have receipts to show for it."

"We frequently settle such cases," explained Shaw. "The fine ranges from \$25 to \$100 and we are allowed by the law to use our discretion."

—Chicago Tribune.
(The name of G. A. Harper does not appear in the latest register issued by the State Board of Health.—Ed.)

Dr. A. J. Ochsner, chief surgeon of the Augustina and St. Mary's hospitals, Chicago and Meyer T. Sturm, an architect of 84 LaSalle St., Chicago, has been awarded the first prize, a gold medal, for plans exhibited at the St. Louis exposition. The exhibit consisted of plans for

a hospital for the treatment of contagious diseases, a hospital for towns, a hospital for cities, and a gynecological and obstetrical hospital. The hospital for contagious diseases departs radically from the old style pavilion plan, and treats all diseases in one building by a unique floor arrangement.

Millions In It.

If that Philadelphia boy on whom the doctors have grafted a rabbit's eye could just find a clever performer with a harelip they would make a great team of headliners for the Belgian circuit.—Indianapolis News.

Dr. Albert Dollear of Jacksonville, has been appointed county physician of Morgan County.

Dr. Matthew Wilson of Evanston has announced his engagement to Miss Flora Freedman of Mendota.

Dr. Bayard Holmes of Chicago addressed the Teachers Association of Illinois at their annual meeting at Springfield on the physiology of play. He divided his subject into spontaneous and organized play. He defined play in its broadest sense to be any activity designed for the immediate happiness of the actor. Many interesting points were given by the speaker.

STATE WAR ON PHTHISIS.

The Illinois State Association for the Prevention of Tuberculosis was organized permanently January 19, in the Public Library building, Chicago, marking the beginning of a new era in the fighting of the disease.

The general object of the association is "to prevent the prevalence of consumption and other forms of tuberculosis in Illinois." Two specific objects, while they are not named in the constitution of the organization, are admittedly in the minds of those who are most prominently affiliated—to obtain from the legislature an appropriation of \$250,000 with which to build a state sanitarium, and the enactment of a law compelling the registration of all tuberculosis sufferers in the state.

Officers were elected as follows:

Honorary president—The Governor of Illinois.

President—Edmund Janes James, president of the University of Illinois.

Treasurer—James H. Eckels.

Secretary—Dr. Arnold C. Klebs.

Legal adviser—Charles H. Hamill.

Executive committee—E. P. Bicknell, Dr. William E. Quine, Sherman C. Kingsley, Dr. J. W. Pettit, and Dr. George W. Webster.

Central committee—Dr. William E. Quine, Dr. Frank Billings, Dr. N. S. Davis, E. P. Bicknell, Dr. Josephine Milligan, Jacksonville; Dr. N. B. Delamater, Dr. N. H. Graves, Dr. George W. Webster, Dr. W. A. Evans, and Dr. Robert Babcock.

Any city or county interested in the combating of tuberculosis may be affiliated with the association upon application to the central council. The dues are \$1 annually.

The organization of the association was inspired by the Visiting Nurses' association, under the direction of Dr. A. C. Klebs. A meeting of representatives of the various medical and philanthropic societies of the State was held a month ago at the Great Northern hotel and the committee appointed which drew up the constitution and bylaws accepted at the meeting last night.

Asks \$200,000 For Consumptives.

The Glackin bill, for the establishment of a sanitarium for the treatment of tuberculosis, would appropriate \$200,000 for the purchase of a site and the erection of suitable buildings. The intention of the bill is to provide first a home for curable patients, and afterward, either in connection with this proposed institution or at another place, a home for the incurable ones.

Imagines They're Shooting.

Quincy, Ill., Jan. 14.—Dr. Arthur H. Byers, late of New Salem, Ill., was taken into custody yesterday, suffering from nervous trouble. He believes his enemies are trying to kill him, and yesterday morning fired two shots at imaginary persons.

Dr. Wade S. Stevens of Dixon has been convicted of the charge of murder of Alma Barnhart, and sentenced to the penitentiary with an indeterminate penalty.

Passavant Memorial Hospital, Chicago is to be aided by an auxiliary board whose object is to help the board in control of the hospital in the work of enlarging the institution. The following officers will serve:

President—James H. Eckels.

Treasurer—Arthur L. Farwell.

Secretary—Arthur B. Wells.

The first official act of the board was to accept the gift of the house and twenty-five foot lot adjacent to the hospital, which was offered by O. B. Green. It is intended to use the house, in part, as a residence for the nurses.

Dr. Hobbs' Hubby.

Mrs. Lillian R. Hobbs, said to be an M. D. by the Chicago lay press, living at 224 Thirty-first street, enumerates many acts of cruelty in her bill for divorce from Frederick James Hobbs, filed yesterday. She charges in addition she paid the house rent for ten years and bought the furniture as well. In March of last year, she says Hobbs struck her and choked her, breaking her teeth and her eyeglasses. Dr. Hobbs lists her other charges against her husband thus:

Beating her,
Striking her,
Kicking her,
Choking her,
Calling her names,
Throwing her down,
Nonsupport.

Her name is not found in any medical register.

Representative Frank Heintz, of Morgan County, has introduced into the House of the 44th General Assembly a bill requiring an examination of school teachers. This is aimed primarily at Tuberculosis, but covers the entire field of contagious and infectious diseases. The number of the bill is 141, the text of the amendment is in bold face type:

"A bill, for an act to amend Section 5, Article VII, of 'An Act to establish and maintain a system of free schools,' approved and in force May 21, 1889.

"Section 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly: That Section 5, Article VII, of an act entitled, 'An act to establish and maintain a system of free schools,' approved and in force May 21, 1889, be amended so as to read as follows:

"Section 5. Teachers, Qualification—when pay allowed. No teacher shall be entitled to any portion of the common school or township fund, or other public fund, or be employed to teach school under the provisions of this act who shall not at the time he enters upon his duties as such teacher have a certificate of qualification obtained under the provisions of this act from the Superintendent of the State, or the county superintendent of the county in which the school is located entitling him to teach, and also a certificate from some regularly licensed, practicing physician of the county, showing that he is not suffering from any communicable contagious or infectious disease which said certificate shall be the result of an examination made within thirty days of the beginning of his duties as such teacher."

O. E. Miller's Latest Adventures.

Dr. O. E. Miller, owner and manager of Ruskin "University," and reputed proprietor and head physician of a sanitarium for the cure of inebriates and drug victims, has been ejected from the village of Glen Ellyn. He appeared before Justice H. F. Higley, recently, to answer charges brought against him by the village board of running an institution in violation of the village ordinance. He pleaded guilty and was fined \$100 and given ten days in which to close the affairs of the "university" and leave the place. Miller says he will go.

The action is the result of a feeling of dissatisfaction that has been felt among the residents of Glen Ellyn since Dr. Miller first purchased the building of the defunct Ruskin university several months ago. Under the guise of a "university," it is charged, he conducted a sanitarium.

Neighbors declared that screams were heard in the old university building at late hours, and closed carriages arriving in the night made women and children afraid to pass the place after dark. Shortly after taking charge of the institution a young woman "student" escaped while undergoing treatment, and was killed by an express train.

The village law which was violated reads as follows: "No sanitarium shall be permitted within the corporate limits of the village with-

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out a license." Evidence of the violation was secured from "students" at the institution.

Since establishing himself in Glen Ellyn, Dr. Miller has had several clashes with the authorities. Last summer, one of his professors entered a claim for damages against Mayor O. D. Dodge for injuries received when the latter forcibly ejected him from the council room. Dr. Hall, one of the faculty of the sanitarium, left for Chicago today with his family.

The officers of Ruskin "university" were: O. E. Miller, president; George McKay Miller, dean; and H. T. Miller, secretary and treasurer.

The Chicago Baptist Hospital has become the owner of the property it has long occupied at the southwest corner of Rhodes avenue and Thirty-fourth street, paying for the same \$37,500. To secure \$25,000 of the purchase money, it gave a trust deed to Frank J. Llewellyn for five years at 5 per cent. The ground is 214 by 164½ feet and the building is a three story and basement structure.

The City of Berlin has offered three prizes for the best plans for a monument to the late Prof. Virchow.

The air in Chicago, according to Dr. Arnold C. Klebs, is healthful. Kipling's declaration that the city is a place where "they breathe dirt," was qualified yesterday in a lecture before the Woman's Club at the Northwestern University Settlement House, at Augusta and Noble streets.

"Coal miners," declared Dr. Klebs, "so far as tuberculosis is concerned, are the healthiest people in the world. There appears to be something invigorating in the coal dust they breathe. According to this, Chicago should be an ideal place for a tuberculosis patient. We have plenty of coal dust here."

That it was not necessary for the person suffering with the "white plague" to go to Colorado was made clear by a succession of stereopticon slides, representing persons sleeping on housetops and verandas. "The tops of the tenement houses and the apartment buildings," the lecturer declared, "could be made into sanitariums at no expense."

Dr. Klebs, who, with his lecture inaugurated the work of the newly organized State Society for the Prevention of Tuberculosis, also told his audience that it was indoor life and whisky that caused most of the consumption in the United States.

His Worst Fears Confirmed.

Finding himself standing in front of a doctor's office, Tuffold Knutt yielded to a sudden impulse and stepped inside.

"Doc," he said, "kin a man git sick by jist breathin' a unwholesome atmosphere?"

"He can," answered the doctor. "I shall be obliged, my friend, if you will improve the at-

mosphere of this office by getting out of here in just three seconds. One—two—"

But Tuffold Knutt was on the outside.—Chicago Tribune.

Enormous Increase in Drug Victims.

Supt. Sloan of the bridewell, Chicago, reports a great increase in drug victims coming under his care. In 1903 they numbered 309. In 1904 the number grew to 970. Cocaine, morphine, opium, paregoric, codeine, and other victims filled the cells. Many were women, and most blamed physicians, who prescribed the drugs to them in illness.

Dr. Cale W. Coe of Stonington is practicing in New Mexico where he was obliged to go for his health. He is much better.

Dr. Geo. E. Clements of Springfield has gone to Crawfordsville, Indiana.

Dr. C. B. Ripley of Alliance, Neb., has been transferred to Galesburg, Ill.

Dr. Chas. W. Sly has moved from Verona to Benson, Woodford County.

Dr. O. N. Carr has moved from Kewanee to Verona, Grundy County.

Dr. Frank Billings of Chicago, accompanied by his daughter and sister has gone to Honolulu on a vacation trip.

Dr. A. B. Cary of Donnellson has gone to Florida for the winter.

Dr. A. C. Jackson of Heaton has moved to Tower Hill.

Dr. Robert N. Canady of Irving has moved to Litchfield.

Dr. N. H. Boone of Chandlerville is seriously ill.

Dr. H. D. Rothgeb has removed from East Lynn to Gibson City.

Dr. Saml. Bane has moved from Ellsworth, McLean County, to Peoria, and has taken an office at 325 Masonic Temple.

FOR SALE—A village and country practice of \$2,000.00 to \$2,500.00 in McLean County, Illinois. Complete office and driving outfit and thorough introduction for \$800.00. Address A. R. P., care of Journal.

TO RENT—Office hours in the Columbus Memorial Building. Inquire of Dr. J. R. Pennington, suite 1101, Chicago.

FOR SALE—Residence, office furniture, etc., in one of the most prosperous communities in Illinois. Owner is obliged to leave for California on account of illness of wife. Address T. W. W. care Ills. Med. Journal.

LOCATION—In a first class rural community in Indiana near the Illinois line; good farming community, graveled roads, etc. Address S. N. S., care Ills. Med. Journal.

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The Illinois Medical Journal.

EDITORIAL OFFICE, 522 CAPITOL AVENUE, SPRINGFIELD.

Copy for advertisements must reach the editor's office by the 20th of the month in order to secure insertion.

PUBLISHER'S NOTES.

The Journal is not responsible for any medical or therapeutical views expressed in this department.

Treatment of Genito-Urinary Troubles.—

Cystitis being the most frequent of the chronic inflammations of the urinary tract, we may take it as an example for consideration. My experience with hundreds of these cases taught me to always examine the urine closely. From a therapeutic standpoint, we are not interested so much as to just where the irritation is located as we are in what will cure the patient. In these cases I have prescribed cystogen, which has a direct action upon the mucous membrane of the genito-urinary tract. Formaldehyde is liberated in the urine, and the whole tract, from the glomerulus of the kidney to the meatus, is bathed with a solution of formaldehyde, thus preventing the formation of pus, allaying irritation and overcoming decomposition. Cystogen aperient was prescribed in many cases. This is an effervescent salt of cystogen, containing phosphate of soda, and its administration was followed by marked improvement in all cases. Cystogen aperient should be prescribed when a laxative is desired in connection with the therapeutic effect of the drug.—(Brose S. Horn, M. D., in *Charlotte Medical Journal*.)

In the *British Medical Journal*, Dec. 2, 1904, **Arthur E. Barker**, F. R. C. S., Prof. of Surgery, University College, London, published a second paper on beta-eucain and adrenalin in infiltration anesthesia. The technic is that previously described; but he has modified his solution to the following: Distilled water, $3\frac{1}{2}$ ozs.; beta-eucain, 3 grains; sodium chloride, 12 grains; 1:1000 adrenalin solution, 10 minims. The whole quantity can be used in an ordinary case, if necessary, and is quite sufficient for most. But he has often injected twice as much when large areas had to be dealt with, and never saw ill results from 6 grains beta-eucain and 20 minims adrenalin. The sodium chloride renders the solution isotonic with the blood, preventing pain from the injection. The adrenalin enhances the duration of the anesthesia; eucain alone anesthetizes only for about 15 minutes, while the combination produces an anesthesia lasting 3 or 4 hours. But it is more slowly produced when adrenalin is also used; and it is therefore well to wait some 30 minutes after injection before all larger operations, to allow insensibility to develop fully.

Barker never saw any depressing effects follow, although in several exceptional cases up to 6 grains eucain were injected. To judge from the reports of those who use cocain for local analgesia, the contrary is the case, and they recommend the subcutaneous injection of

strychnin, the use of camphor and other stimulants during operation. They also insist that the patient should be kept quietly in a horizontal position for some hours after operation. With eucain, Barker's patients have taken no harm from walking away from his house, even when it was used freely; and in the hospital no after-treatment was necessary. This appears to be a strong point in favor of eucain, if the anesthesia is in any degree equal to that of cocain. From what he has seen and heard, his method appears to have given better results than cocain, and the fact that all injections can be finished ere operation is begun and need not be repeated, places eucain for long operations far above those in which (Schleich) injection has to be done over and over again in the course of an operation. He finds it difficult to understand after the operations recently performed, why anyone still employs cocain, which is admittedly far more dangerous and cannot yield better results. A list of his last series of 91 operations under eucaine analgesia is appended: among them are 8 abdominal sections, 23 herniae, 5 amputations, 12 varicose veins, 3 thyroid tumors, and 3 orchidectomies.

A Substitutor Convicted.

Kress & Owen vs. Cruttenden.—On the 8th day of December, Police Magistrate Denison, in the Police Court, registered a conviction against Thomas Cruttenden, Jr., who keeps two drug stores in Toronto, one at the corner of Howard and Sherbourne Streets, and the other at the corner of Gerrard and Sumach Streets, for infringement of the trade mark, duly registered in Canada, owned by Kress & Owen Co., 210 Fulton Street, New York, "Glyco-Thymoline." The evidence conclusively showed that the defendant had put up a preparation under the name of "Glyco-Thymol," and with labels worded verbatim et literatim to those of the original manufacturers. The magistrate, in registering the conviction, gave the defendant's solicitor, who hinted at an appeal, to understand that if he entertained that idea he would not only fine but imprison his client as the law provided. The case was adjourned for a week, at the end of which time Cruttenden, through his solicitor, gave an understanding that he would stop all manufacture of Glyco-Thymol and destroy all labels, bottles, etc., connected with the sale of that preparation. The firm of Kress & Owen Co., are deserving of congratulation over the result of this case. They had every reason for prosecuting Cruttenden, as it was nothing short of dishonest and entirely contrary to the law,

that he should stoop to such practices and try to rob the firm who by strictly ethical advertising (solely to the profession) and the expenditure of about \$175,000 per annum, have secured a large sale of Glyco-Thymoline, a preparation found valuable in catarrhal conditions of the mucous membrane.—*Canadian Journal of Medicine & Surgery*, Editorial, January, 1905,

During La Grippe and Afterwards,

the experience of thousands of physicians proves the value of **ANGIER'S PETROLEUM EMULSION**. It braces the patient, enables him to withstand the ravages of the disease and guarantees him freedom from the subsequent exhaustion and sequelae. **ANGIER'S PETROLEUM EMULSION** promptly relieves the cough and symptoms of respiratory irritation, palliates the nervous symptoms and hastens convalescence.

Book Notice.

A treatise on Diseases of the Nervous System by L. Harrison Mettler, A. M., M. D., Associate Professor of Neurology, College of Medicine of the University of Illinois, Professor of Mental and Nervous diseases in the Chicago Clinical School, Consulting Neurologist to the Norwegian Deaconess' Home and Hospital, Chicago—complete in one volume, profusely illustrated, Cleveland Press, 1905. Price \$5.00.

This massive volume of nearly 1,000 pages with 212 illustrations is a noteworthy production of a careful, practical and industrious neurologist. Its *raison d'être* arrangement, and methods are so fully described in the preface that we give this in full.

Preface.

The Neurone Doctrine is now an accepted fact. Its teachings have done more to illuminate the dark places of neurology than has any single scientific generalization heretofore promulgated. In spite of the fact that in regard to many of its details much has yet to be learned, the main principles which it lays down are universally acknowledged to be scientifically accurate and practically useful. The present treatise has been written with the view of presenting the subject of neurology in consonance with this doctrine. The diseases are classified, so far as possible, upon that basis. The neuron structure of the nervous system is given special emphasis. And the role of the neurone in the matter of the pathology and symptomatology of these diseases is kept well in view. The author feels that the time has arrived for the frank recognition of this great doctrine, not merely in histology but also in the greater field of neurology. He is convinced that one cannot acquire a proper conception of modern neurology without an adequate knowledge of the neuron structure of the nervous system. Mistakes in the diagnosis and blunders in the treatment of diseases of the nervous system can be minimized only by keeping well in mind the facts taught in the neuron theory. If the present volume will enable the student and the practitioner to behold the entire field of neurology—modern neurology—under the

brilliant illumination cast upon it by this scientific generalization, the highest wish of the author will have been attained.

The unity of the nervous apparatus and its functions, the author believes, is not today taught as emphatically as it should be. In some quarters the tendency is marked to discuss the nervous system and its diseases in such minute detail that the universal working of the nervous system as a single, uniform, albeit compound organ, seems to have been lost sight of. This is shown particularly in connection with the subject of cerebral localizations. Psychology is a science as well as neurology; and as neurosis underlies psychosis, it is incumbent that a proper conception of modern psychology should be possessed to fully comprehend the nature of the cerebral localizations, the psychic symptoms of nearly all the nervous affections and the entire psychic side of neurology. The author has endeavored to make plain from the standpoint of modern psychology many of the psychophysical manifestations of the nervous organ.

In the presentation of the individual diseases, their diagnosis and pathology have been especially dwelt upon, the writer being of the firm opinion that treatment and general therapeutics are absolutely valueless sometimes positively dangerous—in the absence of a correct or approximately correct diagnosis. Neurology's hardest problems are in the diagnostic sphere. Given a correct diagnosis, the treatment is generally a very simple affair. Diagnosis and pathology rest upon anatomy and physiology hence much space has been given to normal as well as abnormal neurology in the following work.

The proper classification of some nervous affections is still a matter of uncertainty. One has but to recall such troubles as the myopathies, the periodical paralyses, Landry's paralysis, certain types of polyneuritis, exophthalmic goitre, progressive facial hemiatrophy, myasthenia gravis, Bell's mania, disseminated sclerosis, hypertrophic pachymeningitis and many others. The author has classified them in accordance with his own view and with what he believes to be the general view among the best authorities.

Those of us practicing in the North should bear in mind that away down South in Dixie there are many delightful places to which convalescent and invalid patients may be sent with great advantage. For example, no place in the United States possesses a more invigorating and healthful atmosphere in winter than does Biloxi, Miss., which is situated about midway between New Orleans and Mobile, right on the shores of the Gulf of Mexico. Especially is Biloxi an admirable point to which a patient may be sent, for the reason that there is at this place one of the most attractive and thoroughly equipped institutions in the whole country for the care of just that particular class of patients. We are told that in this admirable institution is an elaborate system of baths, including hot sea baths at all seasons, which is splendid at all times, but especially so in winter.

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THE CURE OF INGUINAL HERNIA.*

BY M. L. HARRIS, M. D., CHICAGO.

The inguinal variety is the most frequent form of hernia, and my remarks will be confined to this particular form.

Its very great frequency; the amount of discomfort and trouble produced by it; the danger to which one afflicted is constantly exposed; the amount of charlatanism and quackery displayed throughout the land in its treatment, and the ease and certainty with which it can usually be cured are my reasons for presenting to you this time-worn subject.

An examination of a large number of individuals in hospitals, public institutions, military service, etc., shows that about one person in every twenty to thirty is afflicted with some form of hernia.

Of 10,000 cases of hernia observed by Berger, 5,997 concerned male subjects over 15 years of age, and of these 5,875 were of the inguinal variety. These figures show not only the great frequency of hernia in general, but also the great preponderance of the inguinal form.

Hernia affects individuals of all ages. It comes to the infant at breast as a drag to its struggles for existence; it clings to the provider of bread during his best years to handicap his efforts; it torments the aged in his declining days. It is no wonder, then, that its treatment has been a fruitful field for the quack and the charlatan from almost the beginning of time.

The cause of the great relative frequency of inguinal hernia as compared to the other varieties is to be found in the defect of the abdominal wall incident to the descent of the testicle. The peritoneal prolongation

which precedes the descent of the testicle still persists at birth in practically all males.

The testicle lies at or near the most dependent part of this pouch, but really within the peritoneal cavity as the pouch and general cavity are continuous.

During the normal course of events the testicle is excluded from the general peritoneal cavity by the obliteration of all of the pouch with the exception of that portion which immediately surrounds the testicle. This remains and constitutes the tunica vaginalis testis.

Were nature more prompt in closing this process, inguinal hernia would be less common, but unfortunately she is frequently derelict and the process remains open throughout all, or a part of, its course.

This failure on the part of the pouch to become obliterated occurs oftener than was formerly supposed. Up to the 4th month after birth, Sachs found the process entirely open in 30%, and partly open in 29% of the cases examined. Féré in 188 children up to 9 years of age, found the process partly open 41 times and entirely open 18 times.

When this process partly closes, the obliteration takes place most frequently at the testicles, leaving a peritoneal pouch extending from this point to the free cavity. The obliterated portion may be quite limited in extent or it may extend along the cord a greater or less distance, leaving behind a pouch or sac of varying depth. It is the presence of this preformed sac that forms the great predisposing cause of inguinal hernia in infants.

When the processus vaginalis has suffered no obliteration so that the loop of bowel which enters it may come in immediate contact with the testicle, the hernia is said to be of the congenital variety.

This does not mean that the hernia is necessarily present at birth, for this is seldom the case, but it means that the sac into which

*Read at the meeting of the North Central Illinois Medical Society, December, 1904.

the contents pass is a preformed sac occurring during the normal course of development, but which, owing to an arrest of development, failed to become obliterated.

Such a sac may remain quite small or it may be large enough to receive a portion of the omentum, or a loop of intestine at any favorable moment, and when this event takes place, we have a congenital hernia, no matter at what period of life it may occur or whether the contents enter the same compartment as the testicle or not.

Unobliterated portions of the processus vaginalis are quite common, as they have been found by various observers in from 20% to 30% of male children.

The importance of the presence of these sacs as a predisposing cause of inguinal hernia has not been sufficiently appreciated, particularly the fact that a sac may remain unoccupied for years, and then owing to a marked increase of intra-abdominal tension or severe straining or heavy lifting, a loop of bowel may suddenly enter and a hernia exists.

As it is impossible to produce a sac suddenly by stretching the peritoneum, it is self-evident that a hernia which appears suddenly after the manner just mentioned or as the result of a fall or injury must have had a pre-existing sac, and that the particular incident merely furnished the favorable moment for the sac to become occupied.

With the exception of the herniae in congenital sacs, all herniae grow slowly, and many times one finds the patient unable to fix the exact time when the trouble began.

Not uncommonly, when making a general examination of a patient, one finds a distinct bulging in the inguinal region, showing an early stage of a hernia which had not been recognized by the patient.

Again, a patient, while lifting or straining, or as a result of a fall, may suddenly experience a sharp pain in the inguinal region, and on placing the hand there discovers the bulging which indicates that a hernia has already begun.

When once started, herniae progress with varying rapidity. Some develop rapidly, others slowly, depending upon the indi-

vidual's occupation, general condition, the amount of care and attention given to the use of a truss, etc., but the tendency is for all unsupported herniae to progressively enlarge.

All herniae, whether congenital or acquired, have a sac which consists of peritoneum. The sac in the congenital variety, particularly when it has not been long occupied, is usually quite thin and so intimately connected with the cord that it cannot be separated from it without lacerating the sac, while in the acquired form the sac is always of new formation, and therefore thicker, more easily identified, and separable from the cord without difficulty. Arising from the external iliac artery and ascending toward the umbilicus on the inner surface of the anterior abdominal wall is the deep epigastric artery accompanied by its veins.

These vessels have always played an important role in hernia. They constitute the dividing line which separates the inguinal form of hernia into two varieties, the external or oblique, and the internal or direct, and while much of the importance which was formerly attached to this artery in herniotomy has been lost owing to the present open method of operating, still the distinction between external and internal hernia is of some importance.

In the former variety the sac follows the cord and is more intimately connected with it. The congenital herniae belong to this variety as well as the majority of the very large herniae. Internal herniae are usually small, although there are exceptions to this rule. The sac lies internal to the cord, and as it is not covered by the cremaster, the cord is easily separated from it. Owing to the presence of considerable pro-peritoneal fat in this region, these sacs are frequently found covered with a thick layer of fat. In fact, the fat may be so abundant as to give to the entire mass when cut down upon the feel and appearance of a lipoma.

It should be remembered, however, that no matter how much like an ordinary fatty tumor the mass may appear, it almost always contains a peritoneal pouch in its cen-

ter in which may be a portion of omentum or a small loop of bowel. It is, therefore, never safe to ligate them and cut them off without laying them open and seeing that the sac is empty. The pro-peritoneal fat in this region is continuous with the prevesical fat and the peritoneum passes from the abdominal wall on to the bladder. If the inner portion of the sac be drawn out, it is frequently possible to bring the bladder into the opening, and it is not uncommon in this variety of hernia to find a small portion of the bladder presenting to the inner side. This should not be forgotten, as the bladder has been wounded a number of times when ligating and cutting off these sacs.

The bladder may present itself in three ways:

First. That portion of the bladder which is uncovered by peritoneum may appear to the inner side of the sac constituting a para-peritoneal vesical hernia. This is the most common.

Second. The bladder may form part of the wall of the sac, its peritoneal surface presenting within the sac, its uncovered portion presenting without—a peri-peritoneal vesical hernia.

Third. The bladder may form all or a part of the contents of a regular hernia sac, constituting an intra-peritoneal vesical hernia. This is the least common form.

I have met with the first two forms several times. There are a number of interesting though rare conditions which are met with in herniae of the inguinal region, but time will not permit of an extended description of them here.

It is unnecessary to consider at this time the symptoms and diagnosis of hernia as there is usually no difficulty in recognizing the ordinary rupture when present, and besides the chief purpose of this paper is to treat of the management of these cases.

In considering the treatment of hernia, it should be remembered that with the exception of the congenital variety during the first year of life, the tendency is not toward a spontaneous cure, but when unrestrained, to progressive enlargement. Some form of

retentive appliance is, therefore, necessary, and almost every form of bandage or compress imaginable has been employed for this purpose.

At one time great curative powers were attributed to special forms of trusses, which ideas have been greatly fostered and spread, even to the present time by extravagant and untrue statements made in the lay press by inventors and manufacturers of trusses. It may be truthfully said that the cure of an ordinary inguinal rupture in an adult by means of a truss is a delusion.

Berger, whose experience embraced over 10,000 cases, says concerning a cure by the use of a truss: "After adult age one ought no longer to think of it."

In early life, however, it is a different matter. At this period of life there is a natural tendency for the inguinal canal and the inguinal process to close, and if the sac can be kept free from contents for some time by a properly applied bandage or truss, it may become obliterated. Berger says: "In infants and the new-born simple congenital herniae can and ought to recover by the regular use of bandages." He also says: "The chances of recovery diminish rapidly as the age increases," and furthermore, "If at the end of some months of this treatment the hernia presents the least tendency to recur or even if the finger placed upon the hernial opening still feels an impulse on coughing, one ought no longer to think of success."

Coley says: "About 75% of the herniae in infants can be cured by the use of a truss provided treatment be continued for at least two years. Even in infants this treatment at best is a very tedious affair. If one simply turn such a case over to an instrument maker, nothing can be hoped for. It will require the constant care of a trained nurse or a very intelligent mother with plenty of time and an inclination to devote it to the care of the child.

When the hernia has been once reduced it should not be allowed to descend again. This means that a suitable bandage or a well fitting truss that will retain the hernia

must be applied and kept in place constantly, day and night, in the bath, and out of it. This requires several bandages or two or more trusses, so that as soon as one becomes wet or soiled, another may take its place. When making the change the nurse must guard the opening every minute with the finger, lest a loop of bowel slip down and all thus far gained be lost. Great care is necessary to prevent excoriation of the skin which would compel an interruption in the treatment. Everything which causes straining or increased intra-abdominal tension, such as adherent prepuce, gaseous distention of the bowels, constipation, coughing, etc., must receive proper attention. It will thus be seen that the cure of a hernia by retentive appliances even in the infant is not a simple task and in the adult cannot be expected.

The value of the truss as a curative means in hernia is very well summed up by Graser in "*Bergmann and Mikulicz Surgery*." He says: "We live in an age when this palliative treatment has lost its significance."

Some years ago there arose in America and Europe a method of treatment of hernia known as the injection treatment. It consisted in the injection of a few drops of some irritating fluid, usually *Tr. Iodin*, *Fl. Ext. of White Oak Bark*, or alcohol with a hypodermic syringe about the hernial opening, the idea being to excite sufficient inflammatory exudate to close the opening and thus prevent anything escaping into the sac. After a fair trial the method was abandoned as being not only unreliable so far as effecting a permanent cure was concerned but also not free from danger.

It would not be necessary to mention this treatment were it not for the fact that it was revived a few years ago by a few regular surgeons, but chiefly by itinerants and advertisers who claimed for the method much that was not true.

Almost everything which produces irritation of the tissues has been used in the injecting fluid, but nearly every itinerant

claims that his is the only genuine successful and reliable fluid, the formula of which he keeps secret or only divulges upon the receipt of a sum which varies according to his own avarice and the gullibility of the purchaser.

The substances in most common use today are Zinc Sulph, or Sulpho-tannate, Creosote, Guaiacol, Carbolic Acid, Hamamelis, Thuja, Alcohol, Ether, etc., to which Morphine and Cocain are added to relieve the pain. Lately paraffin has been used to block up the opening.

It is not denied that in some small herniae, particularly in young subjects, a cure may be effected by the injection treatment, but in the average rupture of the adult it is unsuccessful or if sufficient exudate be formed to prevent the escape of the bowel, the tendency is for the mass to yield after a few months and a return occurs unless supported by a truss. I have seen and operated on a number of cases that had returned after the injection treatment.

Infection and suppuration with their attendant dangers, even eventuating in death, have been observed and the method finds no adherents in the ranks of the surgeons. Although attempts to cure hernia by a radical operation were made many years ago, the beginning of the modern operation may be said to date from Bassini in 1884.

In considering the radical cure of hernia, there are two principle questions which present themselves:

1st. What risk does the patient run as to his life, or in other words, what is the mortality rate?

2nd. What are the chances of a recurrence?

It must be admitted that in the earlier operations the mortality rate was comparatively so high and the chances of recurrence so great, that surgeons were constantly trying to formulate the indications for operation or to find a reason why a patient should be operated on. Nowadays the matter has entirely changed. Instead of trying to find the indications for operation we search for contra-indications to operation for the mere

fact that a person has a hernia is sufficient reason why he should be operated on.

In order to make this perfectly apparent let us consider briefly what are the risks which every patient constantly assumes who is the subject of a rupture.

In 10,000 cases of rupture seen by Berger there were 333 cases of so-called accidents of hernia of which 246 or about $2\frac{1}{2}\%$ were cases of acute strangulation. As is well known, a strangulated hernia, if unrelieved, is certain to result in the death of the individual, and even when relieved by operation, the mortality is high. It will thus be seen that about one person in 30 with hernia will suffer one or more of the accidents of hernia, while one in 40 will suddenly be brought to death's door by acute strangulation. Nor does the wearing of a truss prevent the danger of strangulation, for it is found that those herniae which have been retained for some time by trusses are more liable to acute strangulation when the bowel suddenly escapes, and strangulation not infrequently occurs while the truss is on, owing to some sudden and unexpected motion or contraction of the abdominal muscles.

Turning now to the radical operation, we find that the mortality is very low. In 5,419 operations performed by a number of operators there were but 28 deaths (Sultan), and 20 of these were due to causes independent of the operation itself. This is a mortality rate of only $\frac{1}{2}$ of 1%.

Coley had 954 operations with only two deaths. I have operated on over 150 consecutive cases without a death. Placing the risk of the operation at $\frac{1}{2}$ of 1% (5,419 cases), and the risk of strangulation at $2\frac{1}{2}\%$ (10,000 cases), it will be seen that the risk of the average case of hernia unoperated on is five times as great as the risk of the average case operated on. In addition to the increased risk, the unoperated case is subject to the constant annoyance and trouble of wearing a truss. The objection is sometimes made to the operation that the cure is not permanent.

In 2,853 cases followed for one year or

over, there were 123 recurrences, or 4.3% (Sultan). Coley was able to trace over 500 cases from one to nine years and found only seven recurrences.

Could any more forcible arguments than these facts be presented in favor of operation? And now a few words concerning the operation. No attempt will be made to describe obsolete methods.

The principle of the Bassini operation, which is the one in most common use today, is the restoration of the obliquity of the inguinal canal. After ligating and cutting off the sac and drawing the cord to the outer angle as much as possible, the internal oblique and transversalis are sutured to the inner edge of Poupart's Ligament. The cord is then laid along its bed and the external oblique sutured over it. This is the operation in brief. It has been modified slightly by a number of operators, but without any material improvement.

The first real advance made was by the imbrication method of Andrews. In this operation the external oblique, internal oblique and transversalis are all sutured to the inner edge of Poupart's Ligament behind the cord which is carried to the outer angle. The cord is then laid back and overlapped by the lower portion of the aponeurosis of the external oblique. The various layers may be over-lapped or imbricated in a variety of ways.

Girard's modification consists in imbricating as just mentioned, but the cord is brought out at the inner angle. All of the structures are therefore in front of the cord. The suture material used in these operations is usually cat-gut or kangaroo tendon. It is essential that whatever is used be absolutely sterile, for if suppuration occur the success of the operation is seriously jeopardized.

The use of buried non-absorbable sutures of silk, silk worm gut or wire has practically been abandoned, as they persisted in coming out long after the wound was healed. I have seen silk sutures cause suppuration

and become extruded six years after a perfectly aseptic primary union.

In 1898 I introduced the longitudinal wire suture for the closure of operation incisions and the results were so eminently satisfactory that the method has found almost universal use in my practice. It is, therefore, used by me in all operations for inguinal hernia, and it forms an ideal suture.

The wire used is Aluminum Bronze No. 26 and 27 for ordinary purposes. The advantages of this wire over silver are its much greater tensile strength, consequently a smaller wire can be used, and the fact that it does not kink so readily. The wire can be easily, quickly and certainly sterilized by simply placing it in boiling water with the instruments.

Troller has shown that the frequency of stitch-hole abscesses, other things being equal, depends upon the hygroscopic properties of the suture material used, as the majority of such infections are due to the transmission of the germs from the surface to the depth of the wound along the suture material. As the wire is absolutely non-hygroscopic, infection never travels along the wire, and as a result stitch-hole abscesses have been practically eliminated from my practice.

The method which I use in operating for inguinal hernia is described in detail as follows:

A straight incision is made through the skin and superficial fascia parallel with but from $2\frac{1}{2}$ cms. to 3 cms. above Poupart's Ligament, beginning just above the spine of the pubes and extending outward a little beyond the internal ring. This incision varying slightly in length according to the amount of fat present, is sufficient for all herniae, no matter how large the same may be. The aponeurosis of the external oblique is then incised, beginning at the upper and outer point of the external ring and extending outward parallel with its fibers to just beyond the internal ring. The sac and cord

are freed and the sac separated from the cord well up to the internal ring. The sac should always be opened in order to see that it is perfectly empty. It is then transfixed at its neck and ligated with cat-gut, cut off and the stump allowed to retract within the internal ring.

In very large herniae, in size from a child's head up, no attempt is made to separate the entire sac, but it is simply freed and separated from the cord at the neck, cut off and the proximal portion closed by cat-gut suture. The distal portion, when intimately attached to the cord, as it is likely to be in oblique herniae, may be allowed to remain undisturbed, as it gives rise to no trouble. The inner surface of Poupart's Ligament is then freed from all loose connective tissue by rubbing it off with a gauze sponge. The cord is drawn to the outer angle and the opening closed by suturing all the structures, namely, the upper portion of the aponeurosis of the external oblique, the internal oblique and the transversalis to the inner edge of Poupart's ligament. The method of suturing is the part to which particular attention is directed.

A No. 26 aluminum bronze wire is threaded directly in a nearly full curved round needle with a specially constructed eye for carrying wire so it will not slip in the eye.

The needle enters the skin from one to two cms. from the inner angle of the incision, passing directly down to and taking up a "bite" of the beginning of the inner edge of Poupart's ligament. A "bite" about one cm. in length is then taken directly opposite, including the external oblique and the internal oblique and transversalis or so-called conjoined tendon. Then a "bite" in Poupart's ligament, passing back and forth until an opening only large enough to permit the passage of the cord remains at the outer angle. Passing the wire beneath the cord, it is brought out through the external oblique and skin about one to two cms. from the outer angle of the incision.

The wire should be pulled back and forth

until it is perfectly straight and moves easily in the tissues. This wire is very easily introduced by paying a little attention to a few points. Place a snap forceps on the free end of the wire to keep it taut. Draw each stitch taut at once. Enter at a point directly opposite the point of exit of the last stitch. Take each "bite" parallel with the edges to be brought together. Do not make an over-and-over stitch, as it will not pull out. Do not allow the wire to kink.

After the wire is in, the cord is laid along its bed and the lower flap of the aponeurosis of the external oblique covered over it and sutured by a wire introduced in the same manner as the first, but the outer to the inner angle of the incision, leaving an opening at the external abdominal ring just large enough to give exit to the cord. The entaneous edges are now brought together by a third wire on a cutting needle passed in the corium, a so-called subcuticular suture. The incision is sealed with silver foil, a pad of several thicknesses of gauze placed on it over which the ends of the wires are drawn tautly and folded, a larger pad placed on the first one and the whole held in place by a couple of strips of adhesive plaster.

As will be seen, this operation consists of the imbrication method of Andrew's modified by the use of the longitudinal wire suture. This suture can be introduced easily and quickly if the proper needles are used and after one or two trials to become familiar with the technic. It is an ideal suture and holds the edges solidly in accurate apposition. The patient may be allowed to get up as soon as he feels like it, as it is impossible to separate the edges of the wound by any strain that can be put on it.

The wires are allowed to remain in fully two weeks. To remove them they are simply drawn out a little at one end, cut off and pulled out the other way. They come out without any difficulty whatever. Another pad and adhesive strips are applied for about a week longer, when the cure is complete. No truss is worn afterward.

SCROFULOUS ULCERS OF THE LEGS (Bazin's Malady.)

Successfully Treated by High Frequency
Currents.

BY W. F. SOMERVILLE, M. A., B. SC., M. D.
F. R. C. S., GLASGOW, SCOTLAND.

Mr. Jonathan Hutchinson, in his *Archives of Surgery*, vol. V, page 113, referring to Bazin's Malady, says: "It is a name given to a manifestation of scrofula occurring mostly in young women, in which multiple ulcers, the consequence of a sub-cutaneous and self-infective inflammation occur on the legs, such ulcers being difficult of cure, prone to relapse, and presenting appearances very likely to be mistaken for syphilis." He further quotes in the same volume, page 32, a translation by Dr. Colcott Fox, of Bazin's description of the disease associated with that author's name.

The case now to be related must, I believe, be regarded as an example of Bazin's disease. It is true the ulcers were present on one leg only, and that the element of symmetry, which has been a prominent feature of most of the cases recorded, was therefore lacking. But in view of the physical character of the ulcers, of their recurrence, and of the age and constitutional tendencies of the patient, this absence of bi-lateral distribution can hardly affect diagnosis, and support for this position can be found in the fact that Mr. Hutchinson includes among his case records at least two instances in which a similar limited manifestation of the disease existed.

The patient, a young lady of sixteen years, who had spent the greater part of her life in Eastern Europe, was brought to me by Dr. Alexander Thomson, in January, 1904. She was a tall girl, of dark complexion and somewhat phlegmatic disposition. With the exception of a number of ulcers on her left leg and some evidences of anaemia, she appeared to be free from definite signs of disease. There was, however, a degree of cold-

ness of the extremities, and at various times, it is said, she suffered from enlargement of the glands in the sub-maxillary regions. facts which may be quoted in favor of the diagnosis here suggested. Neither in the family history nor in the physiognomy of the patient was there anything to suggest the possibility of a syphilitic taint, and there is no history of tubercle in the family.

The more recent history of the patient is included in the following note by Dr. Thomson:

"In April, 1897, I was called to attend Miss K. T., a young girl of eleven years of age, suffering from chicken-pox. The attack was a very severe one, the eruption being very copious and the fever running high and lasting long; and a considerable degree of debility followed. The patient's home was in the Balkan States, and she was in this country merely on a visit. The coldness of the climate here made her always feel uncomfortable. Her personal history was free from any serious illness, but she had never been robust and was always of a lethargic, indolent temperament. After recovering from the attack of chicken-pox, she went to the coast for the month of July. On her return to town I was sent for to see her on account of the condition of her left leg. On the outer aspect of the middle third of that limb were six or seven punched-out ulcers of various shapes and sizes. The largest was about three-quarters of an inch in diameter, and the smallest about a quarter of an inch across. The ulcers presented a gray, unhealthy surface and were discharging a thin serous fluid. The skin in their neighborhood was of a livid blue color and was much infiltrated. The history given was that within a few days of going to the coast, nodules were observed on the leg in the affected region. These were not painful, but gradually rose above the surface and then slowly broke down to form ulcers. Under complete rest in bed for several weeks the use of cod liver oil and iron and local application of lotions of boracic acid, etc., the ulcers gradually healed. In September, 1897, the patient returned to her home in the East and remained there un-

til September, 1902, when she once more came to Glasgow. During these five years she enjoyed fairly good health, and the leg gave her no trouble. For some months after coming here she continued well, but in June, 1903, nodules began to form in the region that had been affected six years previously. The stages through which these nodules passed were an exact repetition of what had taken place in 1897, viz: slow formation and elevation, breaking down, and ultimate formation of ulcers. The main difference noticeable was, that the edges of the ulcers were on this occasion hard, white, and callous. They were seven in number, and the condition of the surrounding skin was as it had been during the former attack. The blue color was, if anything, more deep: and the scars of the old ulcers were sharply defined as white patches. The new ulcers partly encroached upon the scars of the former ones. On this occasion the treatment adopted in the former attack proved quite useless. The patient remained in bed for two or three months and took malt, hypophosphites, syrup of iodide of iron and cod liver oil. Locally the ulcers were treated with a great variety of dressings, including sulphate of zinc, black wash, compound tincture of benzoin, antiphlogistine, etc., but they utterly refused to heal. The only improvement noticeable was that the surrounding induration lessened and the ulcers had a cleaner and healthier appearance after being dressed for some weeks with antiphlogistine. Thorough scraping of the ulcers was also tried on two occasions, but without benefit. Seeing no improvement was being made, I requested my friend, Dr. Somerville, to try upon my patient's leg the effects of the High Frequency Currents. I shall leave him to describe his treatment, the results of which proved highly satisfactory, and shall only add that I have seen the patient on several occasions since the electrical treatment was stopped and that the ulcers continue soundly healed. With the exception of a temporary attack of ache, she has, indeed, enjoyed her usual measure of health.

Comparing the facts of the case with the

descriptions of Bazin's Malady, I have no doubt that it is an example of that disease, though it must be placed among the rarer members of the group in consequence of the ulceration affecting only one of the lower limbs.

When the young lady came to me from Dr. Thomson I found on the anterior aspect of the left leg seven punched-out ulcers ranging in size from a threepenny bit to a florin. The ulcers had undermined irregular edges resembling markedly the ulcers produced by specific disease to which, as Mr. Hutchinson points out, cases of Bazin's Malady are apt to be referred. The skin in the immediate neighborhood of each ulcer had the dark red "violaceous" character described by Bazin, and was free from irritability and tenderness.

Dr. Thomson has noted the treatment adopted by him. The High Frequency Currents were first applied by me on 12th of January, 1904, and were continued till 28th of March, 1904, forty one applications in all being employed. The patient sat for about eight minutes on the auto condensation couch, thereafter the limb was treated by the spray éffleuve and also with a flat glass electrode of high vacuum connected with the top of the Oudin-Dean resonator. Very shortly after treatment was commenced the ulcers began to take on a more healthy appearance. They gradually filled up and the usual healing line was soon noticeable till finally they were covered entirely with healthy skin.

I saw the patient at the end of January, 1905, ten months after treatment had been discontinued, when I found the ulcers still perfectly healed, the skin of the limb quite smooth, and was surprised to learn that a short time previously, the young lady had walked no less than thirty miles in one day without any evil effect, and had been climbing hills during the summer holidays.

Dr. M. L. Kors, of Virginia, until recently connected with the medical department of the Burlington Railway, is now connected with St. Luke's Hospital, Chicago.

NERVOUS SEQUELAE OF INFLUENZA.*

BY JULIUS GRINKER, M. D.,

Professor of Nervous and Mental Diseases, Chicago Post-graduate Medical School, Instructor in Clinical Neurology Northwestern University Medical School, Attending Neurologist Cook County Hospital.

Hitherto syphilis and hysteria have held the undisputed title of being the most protean and polymorphous in the entire catalogue of diseases, but in the light of recent experience, influenza must be ranked in the same class.

Influenza can produce, either directly or indirectly, almost any known disease, from a mere feeling of lassitude to the opisthotonos of cerebro-spinal meningitis; from slight moodiness to the frenzy of mania. It becomes, therefore, necessary to familiarize ourselves with the various conditions that may arise after an attack of influenza, before we can adopt proper prophylaxis and treatment.

Although we are still ignorant of the exact manner in which influenza produces its pernicious effects upon the human body, we are certain that the nervous system suffers the brunt of the attack, early and late in the disease. It resembles in this respect the other infectious diseases, and particularly diphtheria, in which the toxin also seems to have a selective effect upon the nervous system. The effects of the influenza poison, whatever that may be, are either immediate or remote. The immediate effects of the toxin are shown in affections of the peripheral nerves and the cerebro-spinal centers. The remote effects are manifested in lowered tone of the nervous system, predisposing to other diseases.

As this paper deals with nervous sequelae of grippe, I shall omit a discussion of the nervous symptoms as they occur during the development and the progress of the disease.

Among the isolated nervous symptoms fol-

*Part of a Symposium on Influenza, read before the Northwestern Branch of the Chicago Medical Society, in the January 1905 meeting.

lowing influenza must be mentioned persistent headache, insomnia and neuralgia.

The *headache* may be very severe and resist all our therapeutic measures. In this connection I recall a post-influenzal headache in my practice which baffled my efforts and caused me not a few sleepless nights. As though to prove how futile was treatment, the headache disappeared when treatment was discontinued.

The post-influenzal *insomnia* is occasionally very troublesome and may lead to serious annoyance, but as a rule it disappears after a variable length of time.

The *neuralgias* following grippe are usually not as severe as the ordinary neuralgias and yield more readily to treatment.

Under certain conditions the influenza toxin exhibits a remarkable predilection for the spinal nerves, giving rise to a *peripheral neuritis*, closely resembling that following diphtheria. The polyneuritis as a rule develops during the period of convalescence, and appears to involve the nerves indiscriminately, in contrast to those affections that pick out certain nerves or groups of nerves. It may present sensory, motor, vasomotor, or trophic symptoms, or all combined; but sensory and vasomotor symptoms are more prominent than in diphtheria and some other forms of multiple neuritis. In the post-influenzal polyneuritis recovery is the rule and usually takes place under four weeks, but may be delayed for months.

In the *spinal cord* influenza is capable of reproducing almost any one of the pathologic conditions.

Neurasthenia. Influenza has exerted a most pernicious influence upon neurasthenia by aggravating existing symptoms and producing new ones. Patients with no neurotic tendency have developed neurasthenia as a result of influenza. The dominant features were mostly hypochondria and motor weakness. It is noteworthy that the neurasthenic symptoms do not stand in any relation to the severity of the attack of influenza that precedes their development; very mild cases may be followed by the most distressing nervous disturbances.

Hysteria frequently follows in the wake of influenza. We may have the attacks of major hysteria with convulsions and the characteristic attitudes, or minor hysteria, which is a rudimentary variety of the former. Hysterical contractures, palsies, aphonia, aphasia, sensory disturbances, may occur. A hysterical tendency was probably present before the infection occurred. Instances have been reported of hysteria developing after influenza in patients previously free from any neurotic taint.

Epilepsy of the ordinary idiopathic type has occasionally been seen to develop after influenza. In these cases recovery may occur.

Melancholia. In most of the cases depression of spirits and loss of volitional power were the prominent symptoms. The type of melancholia commonly observed is the simple variety with lethargy, anemia and loss of body-weight. A type of melancholia with mental confusion and general depression has been observed to follow influenza within three to four months after the initial chill. The other forms of post-influenzal insanity do not differ essentially from varieties of insanity due to vital depression.

Although authorities state that the post-influenzal psychoses may develop in patients with good family history, it is certain that insanity in the family record constitutes a predisposing factor. The prognosis of influenza psychoses is generally good under proper management. It is often necessary to send the patients to a sanitarium, or what is still better, to a general hospital having special facilities for the treatment of mental cases. In this way we do not stigmatize them for life as ex-inmates of an insane asylum.

After a patient has recovered from influenza, he may develop tabes, general paresis, spastic paraplegia, multiple sclerosis, encephalitis, poliomyelitis, and a host of other organic diseases of the nervous system. It will be found, however, that influenza is neither the sole cause, nor is it the important factor in the production of those diseases,

but merely constitutes a contributing element by lowering the natural resistance of the patient.

In conclusion, I wish to state that influenza must be considered a serious disease, not alone for its immediate effects upon important viscera, but also for its subsequent effects upon the nervous system.

Bearing in mind these facts, it will be our duty to treat even the mildest case of influenza with a great deal of circumspection. It is in this way that we may possibly save our patients from the living tomb of an insane asylum and from the miseries of chronic invalidism.

100 State St.

EPIDEMIC SMALLPOX.*

BY J. J. CONNER, M. D., (U. OF M.), PANA, ILL.

Synopsis: Extent of the epidemic; difficulty of diagnosis; confusion regarding the nature of the epidemic due to unfamiliarity of the history of early epidemics; similarity of the present epidemic to early ones shown by citations from old authors proving that the prevalent disease is merely a repetition of the course and character of the early epidemics; *claim made that smallpox is not a single unity of etiology but is a complex of similar diseases and will soon be differentiated into two or more distinct ones as some other diseases have been in the past;* our duty to the public in the prevention and handling of the disease.

Mr. President and Gentlemen: As you are aware an epidemic of smallpox has been prevalent in the United States for several years, and on account of its modified form it has given the physicians and sanitarians who have come in contact with it no little trouble and anxiety, it being difficult sometimes to say whether one had to deal with a drug eruption, chicken-pox, the mange, or one of several other things too numerous to mention here on account of lack of time and

space, but which was capable of setting the physicians by the ears in the afflicted neighborhood, and costing the community a vast deal of expense.

I am not going to try to make a learned discourse on the differential diagnosis of the diseases which it may be confounded with. I hope to have your indulgence in quoting from some of the old authorities on the subject, and to bring out for discussion a point which I have had in mind for three years as to the *nature* of the disease.

First in the study of medicine there was no distinction made in the diseases of the skin, all were known by one name, but as observers multiplied division of the maladies were noted. For instance, measles and scarlet fever counted as one for a long time, but now, by the aid of the microscope, we have subdivided them. We have also the German measles, and yet another disease which is not yet specifically named, and must be known for a time as the "Fourth Disease." Typhus fever was the name by which all filth diseases characterized by certain general signs and symptoms were known, but Gerhard, of Philadelphia, succeeded in establishing typhoid fever, and now we have para-typhoid fever. For centuries there was no distinction between chancre and chancreoid, but John Hunter established beyond cavil the two diseases.

Various explanations and theories have been offered for the appearance of the different forms and grades of the lately prevalent modified smallpox. The usually accepted theory being that *vaccination* has rendered the change by causing an immunity, not only in the person who may have been vaccinated, but in the descendants of that person as well.

It has surprised me not a little to read in the medical journals the discussion of the question of the nature of the epidemic and to listen to what the older physicians had to say regarding the disease. It has been claimed by many of these physicians that the epidemic was not smallpox at all, for they exclaimed real smallpox is more fatal and the characteristics of the old-fashioned

*Read before the Christian County Medical Society, January 19, 1905.

disease were entirely different to what we are having. These physicians claim that nothing like the prevalent type has been known. I wish to show by the literature of the subject that they were simply unfamiliar with the history of the disease. In talking to Secretary Egan, of the State Board of Health, on the subject, I called his attention to the descriptions of smallpox in Wood and Eberle's Practices of Medicine on the subject.

In a letter to the Secretary, dated Feb. 17, 1902, I wrote:

"Pana, Ill., Feb. 17, 1902.

"J. A. Egan, M. D., Springfield, Ill.

"Dear Doctor: As per your request through Mr. M. W. McQuigg, I send you Volume I, of Wood's Practice of Medicine. On page 393, section 3, in which he describes Varioloid or Modified Smallpox, I think you will find some interesting observations pertaining to the subject: I also send you Volume I of Eberle's Practice, and on page 448 you will find more of the same interesting character. It is surprising to me to see how accurately these two old fathers in American medicine have described the prevailing type of smallpox. One would think that they were actually writing on the present epidemic.

"I have also taken the liberty to send you a 'Suggestive Note' of my own which I committed to paper on the 10th inst., while pursuing the brochures of Hyde and Welch which I received from your office. In reading Eberle to-day, however, I find that he entertained similar views at the time of composing his treatise. I refer to his opening paragraphs on Modified Smallpox, pages 448 and 449.

"I believe, as related in the accompanying 'Suggestive Note,' that we shall soon be able to differentiate the present 'Mitigated Smallpox,' from the regular, old genuine smallpox, but that it is a *member* of the regular smallpox group, variella standing at one end of the class and varioloid at the other. However, it makes no difference as to the proper *handling* of these contagious diseases

as to the hair-splitting differences in them, the thing *to do* is to *vaccinate, isolate* the patients affected, and thereby control it, and if possible, stamp it out.

"I remain, yours truly,

"J. J. CONNER, M. D."

SUGGESTIVE NOTE.

"Yesterday evening (Sunday), while reading and studying the brochures of Hyde and Welch, published as bulletins by the Illinois State Board of Health, it occurred to me that the present 'mild form' of the disease which has spread all over the United States within the last three years, was not, after all, the old-fashioned plague, but was of the same class or germ; that it would be differentiated shortly and named as a member of the varioloses group which has until now not been known as a separate entity heretofore. The future history of this 'mild smallpox' will be in line with that of chancre and chancroid, and typhus and typhoid fevers.

"To John Hunter, of England, is due the differentiation of the two former diseases and to Gerhard, of Philadelphia, is to be given credit for the true nature of typhoid fever."

(Feb. 10, 1902.)

Woods' Practice says, Vol. I., page 393: "Different writers on smallpox had recognized various modifications of the disease, occurring especially during its epidemic prevalence, long before vaccination was known. Such were the variolous fever without eruption (*variola variolis*); the crystalline pox, in which the eruption continued vesicular; the stone-pox, horn-pox; and wart-pox (*variola verrucosa*, or *v. cornea*), in which the vesicles dried up into small tubercles, instead of proceeding onward to maturation; and several others which it would be profitless to enumerate. Most of these are now perfectly familiar to us, as the result of the modifying influence of vaccination, or previous smallpox, and are confounded under the general name of varioloid, which has, with great propriety, been

given to the diversified forms of the disease originating in the cause alluded to.

Some have considered the disease which occurs in individuals partially protected, to be a distinct affection, having a peculiar contagion of its own, and bearing to smallpox the same relation as varicella or chickenpox. But that it is nothing more than a modified variola is proved by the facts, that it is produced by exposure to the contagion of smallpox, and is itself capable of producing smallpox in the unprotected. The great diversity, moreover, of its forms, taken in connection with its identity of origin, would appear to show that it could not be a peculiar disease resulting from the unmodified influence of a distinct cause, but must owe its diversity to the unequal degree to some protecting influence in the individuals attacked by it. This diversity is so great that it would be utterly impossible, within any moderate limits, to describe minutely all the shapes which it assumes. There is, in fact, every shade between the slightest symptoms, scarcely recognizable as having affinity with smallpox, and the nearest possible approach to the regular disease. It will be sufficient to notice some of the more prominent of these varieties.

"I have not the least doubt that the variolous fever occurs in some individuals who want but little of being perfectly protected, without any eruption whatever. Such a fever, of about three days duration, has frequently come under my notice during variolous epidemics, and could be explained in no other way than by reference to the prevalent influence. I have always observed it in persons who had been previously vaccinated or affected with smallpox.

"In cases attended with eruption, which are vastly more frequent than those just mentioned, the fever is of various grades of violence and duration, sometimes commencing with rigors, exhibiting the characteristic symptoms of severe lumbar pains, headache, and obstinate vomiting, and terminating upon the third or fourth day, but in other instances slighter, shorter, and occasionally

scarcely sufficient to attract notice. Judging from my own observation, I should say that, in the greater proportion of cases, it is very regular, bearing a much nearer resemblance to the fever of unmodified smallpox than the subsequent eruption does to the eruption of the genuine disease. Indeed, one of the most striking circumstances, in connection with varioloid, is the frequently slight proportion which the amount of eruption bears to the severity of the preceding fever. I have known a high fever lasting three days, to be followed by a single pock upon the breast.

"Another circumstance in the eruption, worthy of notice, is that occasionally the appearance of the proper papulae, as in the confluent smallpox, is preceded by a scarlet efflorescence like that of scarlatina or roseola, which might be alarming were there not evidence of previous vaccination or inoculation, but, under these circumstances, is quite insignificant. It is often followed by a very small crop of the true varioloid eruption.

"Not unfrequently the eruption is copious, and, in some rare instances, it is even confluent. It much more frequently occurs, first on the body, than is the case in the genuine disease. The character of the eruption, and its progress, are not less diversified than its amount. Sometimes it never advances beyond the state of mere papula or pimple; though this is comparatively rare. In much the greater number of instances, it stops short in the vesicular stage, or undergoes but a partial and imperfect suppuration, and begins to dry on the fourth or fifth day of the eruption, forming a small hard tubercle, which soon disappears. Sometimes the vesicles are scarcely umbilicated; or at least a much larger proportion of them are not umbilicated than in regular smallpox. On this account, it is occasionally difficult to distinguish the disease from varicella. In other instances, again, the pock becomes clearly pustular; and it is not uncommon to see the three forms of pimple, vesicle, and pustule in the same case, and at the same time.

"In many instances, the eruption runs its regular course, in all respects like that of genuine smallpox, becoming pustular, and even convex at top, but stopping one or two days sooner, on the sixth or seventh day of the eruption, for example, instead of the eighth or ninth. I have thought that this difference has sometimes been the cause of safety to the patient; and have looked with great anxiety for the signs of a commencing change upon the sixth day.

"Another striking difference between the severest forms of varioloid and genuine variola is the absence of odor in the former. This is generally quite wanting, and always, so far as I have observed, very slight compared with that which is exhaled at the same stage, and with an equal amount of eruption, in the unmodified disease.

"These two signs, the shorter duration of the eruption, and the comparative absence of odor, may be considered as diagnostic signs of varioloid. Any case without them must be looked upon as true smallpox.

"Secondary fever is very rare in varioloid; though it does occasionally take place in the severest cases."

Eberle Prac., Vol I.; Ed. 1845, pp. 448, 449, 452, and 453, says: "Soon after the general introduction of vaccination, exanthematous affections, closely resembling smallpox, were occasionally observed in individuals who had previously undergone the vaccine disease in a regular and satisfactory manner. These varioloid affections became more common, and within the last fifteen years, they have appeared in various countries in frequent and extensive epidemics. In the earlier periods of vaccination, these eruptions were generally regarded as chickenpox, but subsequent inquiries led to the opinion with many, that they are the product of a peculiar contagion; while others were led to ascribe them to the variolous contagion acting on systems but partially protected against smallpox by previous vaccination; and this appears now to be general opinion.

From the earliest times of smallpox of which we have any records, this disease has,

indeed, been frequently noticed under various modifications, as remarkable and apparently as distinct as the form we now call varioloid. We find various irregular forms of the disease described by the early writers under the names of the vesicular, pustular, and spurious smallpox; swinepox, sheep-pox, horn-pox, etc., all of which were regarded as having but one origin, namely, variolous contagion. After smallpox inoculation was introduced, spurious variola was by no means uncommon; and it has always been observed that genuine and spurious smallpox have in the same epidemics come in and gone out together, in the same manner as they have been uniformly been observed to do since vaccination has been introduced.

"It appears, therefore, that various circumstances, either of a constitutional or accidental character, may modify smallpox in a variety of ways; and as such modifications were abundantly observed, before vaccination was practiced, we need not be surprised that they should be so frequent now, when a new and very extensive modifying cause exists in the influence of the vaccine disease.

"By viewing the subject in this light, a great deal of that perplexity and confusion which have existed in relation to those anomalous pustular and vesicular affections, which usually precede or accompany smallpox epidemics, are entirely removed. We perceive that the same morbid agent, modified in its effects on the human system by various causes, lies at the root of all this family of eruptive complaints. They are all, it would appear, the offspring of the same parent, and though diverse in their appearance, they possess enough of family likeness to enable an accurate observer to refer them to a common origin.

"Facies non omnibus una,

"Nec diversa tamen, qualem decet esse sororum.

"(All forms are not alike, nor yet so different but that they seem to have a family resemblance.) (Translation by M. N. C.)

"As the degree of modifying influence of the different causes which are capable of pro-

ducing variations in the effects of variolous contagion must be extremely various, it is obvious that the irregular or varioloid diseases which result from the combined agency of the modifying causes, and the virus of smallpox must be correspondingly diverse; and we find, indeed, so great a diversity in this respect, that no description can be given of them which can have more than a general application.

"Modified or spurious smallpox, as has already been intimated, is not, however, confined to those who have been subject to the vaccine influence. It occurs, also, in persons who have had the smallpox, as well as in those who have had neither this or the vaccine disease. This fact has been adduced in evidence, that the varioloid disease arises from a peculiar contagion radically distinct from that which produces smallpox. It is contended, that if this malady were not a peculiar or specific affection, it could not reproduce itself in its characteristic form in persons who had not undergone the modifying influence of smallpox, or of the vaccine disease. In reply to this argument against the identity of these affections, it may be stated, that, on the presumption of their common origin, the varioloid eruption is an imperfect result of the variolous contagion; and it is therefore reasonable to infer that the virus of this imperfect form of the disease is also modified, or incapable of producing the genuine affection, unless an extreme degree of susceptibility to the disease exists.

"As to the production of varioloid affections by the smallpox contagion in those who have already had smallpox, there does not appear to exist any difficulty in accounting for it satisfactorily. We know that an attack of smallpox does not always obliterate the constitutional predisposition to the variolous contagion. Even after the system has passed through the most perfect form of the disease, a second attack will in some instances occur. Now, between that state of the system produced by smallpox, which affords perfect immunity from a second infection, and that state in which the susceptibility to a subsequent attack is undimin-

ished, a vast variety of grades of susceptibility must, we may reasonably presume, occur, according to individual idiosyncrasy, temperament, accidental concomitant influences, and perhaps the activity of the variolous contagion. If, then, after an attack of smallpox, the predisposition to this disease is not entirely, but only partially destroyed, ought we not to look for an imperfectly developed form of the disease, should a second infection take place? It is in this way, we believe, that varioloid, or varicellous eruptions occur in persons who have once undergone smallpox. As to the occurrence of varioloid affections in those who have never had either smallpox or the vaccine disease, it may be observed, that the degree of natural susceptibility to the variolous contagion, are almost infinite in variety in different individuals. We see in the same family, into which this contagion is introduced, one individual affected so slightly as scarcely to require attention, another perhaps only indisposed with variolous fever, without eruption; a third one seized with a pretty severe attack of the distinct smallpox; and a fourth affected with the most aggravated variety of the confluent form of the disease. We may presume, therefore, that where the smallpox contagion acts on a system which is either naturally or accidentally indisposed to the full influence of its powers, it will produce either an extremely mild variolous eruption on an irregular or modified one—in other words, a varioloid or varicellous affection.

"From these and other considerations, I am induced, in common with many others, to regard varioloid as a variety of spurious or modified smallpox, or at least as being referable, for its ultimate source, to the same contagion which produces this disease."

The confusion regarding the diagnosis of 'modified smallpox,' which has possessed the physicians and sanitariums dealing with it, is due to ignorance in confounding a complex disease due to a number of similar etiological factors as depending upon a single unity of cause, as was originally the case in the diagnosis of scarlet fever, measles,

rötheln and the 'fourth disease' from one another on the one hand and between typhus and typhoid fevers, typho-malarial fever, malarial fever, to which has recently been added the non-descript 'para-typhoid.'

"Take for instance, pneumonia. Is there any one so bold as to say that pneumonia is always due to the pneumococci, that Jack-o-lantern which often is not demonstrable in cases that are well marked with all the symptoms and signs of lung involvement? Who will deny that it is often due to a mixture of microorganisms, making it a complexity due to this mixture. Is it not a fact that we often have well marked post-operative pneumonia and yet the pneumococci can not be found in the tenacious and blood-stained sputum?

"What a flood of light was shed upon the localization of syphilis when John Hunter differentiated chancre and chaneroid! And what a puzzle to the tyro or the casual observer these two filthy diseases are yet. Is it to be denied that the future study of smallpox will not yield a differential diagnosis or establish the fact that smallpox is not a unity but a complex disease? Have we already arrived at such a state of perfection in the etiology of smallpox that there is no possibility nor probability of learning anything further about its nature?

"Is it reasonable to think that such a large number of respectable and well educated physicians as are to be found all over the United States would insist that this so-called 'modified smallpox' is not the same as smallpox or the technical variola vera, as has been described from time to time almost immemorially, if there was not *something* substantially different in them? These physicians declare that the unprotected victims of the modified smallpox were not afflicted in many cases any worse than those who had been vaccinated in youth, and those whose ancestry had never been vaccinated nor subjects of variola or varioloid were not any more seriously attacked than those whose ancestry had been scourged by the disease for several generations. There is such a vast difference between old-fashioned small-

pox and this bastard that has afflicted the community, they say, that there is surely something vastly different in the etiology and pathology of the modified and true smallpox.

"There are many curious and strange phenomena about the disease that, I for one do not claim to understand at present. What is the real nature of the disease? Why is it so mild in so many cases? Why does vaccination protect, usually, if it is essentially different from true smallpox?

"At present, for the safety of the people who we are to guard in their health, it is right and proper that all forms of the disease should be regarded as highly contagious and capable of being prevented by vaccination, disinfection, isolation and cleanliness."

HYSTERIA AND NEURASTHENIA— DIAGNOSIS AND TREATMENT.*

BY CYRUS W. RUTHERFORD, M. D., NEWMAN.

A superficial clinical observation of these diseases reveals symptoms that simulate nearly every organic lesion of the nervous system, viscera and joints. A careful study shows them to be definite and distinct diseases, having their own laws and diagnostic symptoms, and that simulation exists in appearance only. But they may co-exist, and organic disease may co-exist, with either of them. Care must be exercised that the hysterical or neurasthenic symptoms do not obscure or completely hide evidences of organic trouble.

A review of prominent symptoms will be taken before proceeding to a consideration of differential diagnostics.

In Hysteria we find such psychical symptoms as overworked imagination and overwrought impulse of inclination. Impressionability and suggestibility are prominently increased. Self control is lessened or lost. Sensitiveness and irritability are exaggerated. Self consciousness is exalted. The patient

fears all manner of dread diseases, and despairs of recovery.

In Neurasthenia, the patient's ideas as to his conditions are more nearly correct, and he has high hopes of recovery.

In Hysteria we find areas of anaesthesia prominent. May be very circumscribed, or hemianaesthesia, or even total. In the latter form, the orifices are not affected. Reflex action of the skin is preserved. Pupillary reflex normal or nearly so. Fingers of an anaesthetic hand may be used skillfully without the aid of sight. Tender spots persist on the anaesthetic side. Usually comes on suddenly and varies in intensity and location. Areas end abruptly.

Hyperaesthesia, may be "points" or "general." Points are found over the ovary, left hypochondriac region, lower portion of the ribs, breast, and along the spine. Areas are not sharply defined, are changeable, and may be bordered by areas of anaesthesia. Pressure may give a sense of relief. No local changes are to be observed at site of "points."

Disturbances of vision, color perception, and movements of the eyes will be found. Deafness may exist, but may be transferred to the opposite ear by suggestion. A determination of the absence of ear disease is diagnostic. Other special senses are correspondingly affected.

Paralyses may exist. Monoplegia, hemiplegia, paraplegia, or even total paralysis may be found. In hysteria the face is probably never paralysed as in hemiplegia from organic brain lesion. Ptosis or aphonia may be present, but may be relieved by suggestion or by electricity.

Contractures may occur, but we find muscle nutrition unimpaired except in the most aggravated and prolonged cases. An anaesthetic may throw light on the nature of these. Ataxia, the inability to stand or walk on well nourished freely movable limbs, and tremor exist. The latter closely simulates those caused by metallic poisons. They cease during repose when the patient is not watched, and are increased by muscular effort.

In Aphonia the patient may sing or talk

in the sleep. Paralysis of the vocal cords is bilateral, while in organic disease it is unilateral. The leg is dragged or shuffled, the foot is not swung out and the toes do not catch on the ground as in organic brain lesion; also the ataxic gait is increased beyond that of organic diseases.

The nutrition and electric irritability of muscles are preserved. Abnormal contraction of *extensor* muscles occurs on testing the grip. The flexor contraction of the hand is not relieved by forcibly flexing the wrist as in organic disease. Ptosis is due to spasm of the orbicularis.

Paralytic incontinence of urine or faeces never occurs in hysteria. In vasomotor and visceral disturbances the globus hystericus is the most prominent symptom. Indigestion and constipation are common. Vomiting is a frequent annoying symptom, food often being rejected before reaching the stomach; usually preceded by no nausea. Rapid heart action and respiration may occur, also an intermittent rise of temperature.

In the hysterical convulsion we find the following diagnostic points: the immediate cause is usually some mental shock, as fear or anger. The patient sinks, rather than falls to the floor. Pupils are equal but rarely normal in size, and respond to light. The color of the face remains normal except when respiration is held in abeyance. The tongue is not bitten, there is rarely blood and froth from the mouth, and the clothing is not soiled by urine and faeces. Consciousness may be preserved, although blunted. Muscular movements seem psychical in character, frequency being maintained, but the force varying; the opposite is true in epilepsy. The hysterical convulsion lasts longer than that of epilepsy. Pressure over some hysteric point may arrest the convulsion. Movements are apt to acquire increased force when restraint is attempted.

In neurasthenia we find *fatigue* the most prominent symptom. Tremor exists in a large proportion of cases. Cramps without apparent cause may occur. Rhythmic spasms of the tongue, neck and diaphragm

may occur along with constriction of the oesophagus. Abasia may be present.

DIAGNOSIS OF HYSTERIA.

Cortical lesions of the brain; paralysis and anaesthesia begin gradually and are not profound or extensive. Contractures cause muscular wasting. Spasm is limited at first and is Jacksonian in character.

Cerebellar tumor has an insidious onset, and facial paralysis. Double choked discs are found.

Hemianaesthesia from brain lesion. Deep reflexes exaggerated. Special senses on affected side are less influenced. This condition is rare unless associated with some motor disturbance.

Hemiplegia. Face is paralyzed on one side. Deep reflexes increased, superficial reflexes lessened or abolished. No profound affection of special senses.

Hemianopsia: very persistent and non-changeable.

Paraplegia, when due to myelitis affecting the lumbar regions we have paralysis of anal and vesical sphincters, loss of reflexes and muscular wasting, bedsores and degeneration reactions. When the cervical or dorsal cord, or the lateral columns contain the lesion true ankle clonus, (which is absent in hysteria), is exaggerated. Reflexes affected, and other evidences of organic changes exist.

In Poliomyelitis, we find loss of reflexes, muscular wasting and degeneration reactions. Siringomyelia, while having many symptoms in common with hysteria, has muscular wasting, weakness of sphincters, and changes in the reflexes. Multiple neuritis shows organic changes in the reflexes, wasting and degeneration reactions. Disseminated sclerosis is difficult to differentiate at times. The acuity of vision lessens gradually in one eye, then slowly improves and then affects the eye. Atrophy of the optic nerve and nystagmus occur. The initial muscular effort, and the contraction of antagonistic muscles are tardy in exhibition. If the hysteric patient is requested to touch a small object with the index finger she usually does so without difficulty,

but shortly a jerky motion of the arm occurs. In multiple sclerosis considerable muscular effort is required to touch the object but when this is done the tremor stops immediately. In cerebral syphilis the history and evidences of syphilis elsewhere are the only guides. Insanity: Monomania must not be confounded.

Epileptic convulsion, if the physician can witness the seizure the difficulty is little. The hysterical convulsion is "brought on by emotion or injury. No aura. No initial cry. Movements co-ordinate. Tongue not bitten and patient never injures herself. Duration perhaps several hours with intermissions. Consciousness generally preserved. Micturition and defecation do not occur. No rise of temperature. May be stopped artificially."—Dana. The epileptic convulsion is opposite in all these particulars.

Feigning: Intentional feigning in traumatic hysteria is difficult to determine. So far as the feigned convulsion is concerned, it is the most difficult condition for the ignorant to feign. If a physician or a trained nurse, differentiation may be impossible.

DIAGNOSIS OF NEURASTHENIA.

Locomotor ataxia: reflex action diminished. General paresis: reduction of mental activity, making mental labor practically impossible. When articulation is impaired, and the formation of written sentences difficult, look for history of syphilis, for symptoms of general paresis may be added to those typifying neurasthenia.

Exophthalmic goitre: in the absence of exophthalmos we have the rapid pulse, agitation, and tremor common in both diseases. The enlargement of the thyroid gland is the only reliable distinguishing feature.

Hypochondriasis: purely mental malady: patient has a fixed idea of some special bodily ailment. Some signs of degeneration may be observed. A hereditary taint is rarely absent.

HYSTERIA AND NEURASTHENIA.

Neurasthenia is an exhausted state of the nervous system with a gradual beginning and ending. There is an absence of crises, contractures, convulsions and other stigmata of hysteria. The hysterical patient usually eats

and sleeps well and is of a contrary disposition. The neurasthenic complains of restlessness and impaired appetite and is docile and easily managed. To differentiate these two diseases, study the manner in which individual symptoms have developed.

TREATMENT.

Prevention, as in any psychopathic or neurotic element should have a prenatal management. However, we rarely get the cases soon enough. The *child* with the inherent predisposition should have the most careful attention. Association and environment should be especially studied to individual need. If the parents are emotional, vicious, or show other reprehensible qualities the child should have his early training and education among well selected tutors and companions. The physical training must receive its due share of attention. Open air exercise, cool baths followed by friction, nutritious and easily digested diet (all sweet meats and stimulants to be excluded.) Systematic habits of eating, sleeping, study and exercise must be maintained, and the general health kept at par.

In the developed case isolation is of the first importance. Attendants and companions are to be selected with skill and sound judgment. The nurse must be of the best and most trustworthy, possessed of tact, gentleness, patience and firmness, and withal of sound sense. The physician should be firm, gentle, and possessed of enough personal magnetism to inspire the confidence and respect of his patient. These, with the exclusion of relatives and friends of sympathetic dispositions and garrulous tongues will give hope of practical benefit. The *rest* cure gives excuse to separate the patient from parents, relatives and friends. It enables the physician to carry out his special plans without interference, and by proper suggestion to inspire his patient with hope. Put the patient in a private house, in a room having plenty of sunshine and free ventilation. Admit no communications, not even letters sent or received, much less visitors. After a few weeks, by way of reward an occasional letter may be allowed. All voluntary movements are at first to be for-

bidden; even the feeding should be done by the nurse, and the patient overfed at that. The circulation and brain-activity are thus at as near repose as is possible. The earliest mark of improvement will be seen in more natural sleep. While the rest cure is applicable to nearly all cases, yet there are a class that *demand* stimulating and diverting exercises, such as the bicycle, lawn tennis, horse-back riding, etc.

Massage may also be practiced with great benefit, especially over paralytic areas, and over the bowels to prevent or relieve constipation. If weight begins to be added rapidly, increase the massage. Low frequency currents applied over the motor points are of benefit. Dana highly recommends hydrotherapy. The jet to the back, the shower and the cold plunge.

Diet should begin with skimmed milk. Later a small amount of meat, then bread, butter and eggs may be added. Feed every two hours while awake. Forced feeding, massage and faradization are important, as is also isolation and rest.

The moral treatment is of consequence and demands tact and skill of the physician and nurse. Hypnotism and suggestion may be employed, but as a rule the former should be avoided as unnecessary. The nurse may increase the patient's confidence in the physician, who may then repeatedly reassure the patient and thus inspire continued hope.

In the main, do with as little *medicine* as the general health will permit. Avoid *narcotics* to produce sleep; use massage at bedtime. While it is a mistake, generally speaking, to give the bromides, yet if there is considerable restlessness with sleeplessness, a 10 grain dose of sodium bromide in a half glass of water after each meal may prove effective.

Tonics, as reduced or lactated iron, arsenic, zinc valerianate, sumbul, asafoetida, etc., may be given when especially indicated.

Gowers recommends oil of turpentine pushed to point of strangury, but his teaching has many opponents. Hysterical children may be benefited with valerianate of zinc 2 gr. and sul. quin. 1 gr. in capsule.

Some authors recommend the wearing of

colored glasses to ward off attacks, but it is necessary to experiment to find the color suited to the individual case.

Special symptoms may require relief. Aphonia and other paralysis may be benefited by electricity, massage, and encouragement to move groups of muscles. Contractures are relieved by gradual and oft repeated extension. It is sometimes necessary to administer an anaesthetic and use forcible extension, or even to resort to tenotomy in extreme cases. Anorexia and nausea are controlled by absolute rest in bed, judicious feeding, and firm management. Retention of urine should be treated by all other means before resorting to the catheter. Use ice to the abdomen, cold douche to the spine, or suggestion.

A convulsion may often be arrested by firm and continued pressure on a hysterogenic zone, application of ice to the spine or abdomen, or by putting patient in a tub and pouring cold water over the head and body. A prompt emetic is usually efficient. Apomorphine hypodermically is generally and favorably recommended. Inhalation of nitrite of amyl may relieve it. Dana recommends a trial of valerian, arom spt ammonia, or Hoffman's anodyne. Hare says to hold the patient's nostrils closed 30 to 40 seconds. Another author tells us to grasp each toe with the hands and firmly extend and flex them alternately. In the management of the convulsion all attendants not really needed should be excluded from the room.

THE LEUCOCYTES AND THEIR DIAGNOSTIC SIGNIFICANCE.

BY H. E. MONROE, SHELBYVILLE, ILL.

Bacteriology and physiologic chemistry have revolutionized the practice of medicine and surgery. Perhaps no one study has contributed more to medical advance than the study of the blood. While formerly we relied upon a knowledge acquired by years of experience for correct diagnostic data, we can now, by associating certain well-known

signs and symptoms with a careful consideration of the blood, be more positive in our conclusions and more scientific in our therapy. The microscope has cast much *lux in tenebra* on all pathological conditions. No more interesting or instructive study is there than that of the white blood corpuscles. Leucocytes are spherical masses of protoplasm, containing one or more nuclei, soft of consistency, highly refractile, have no capsule and possess independent movement. This independent movement or ameboid movement was first described by Davine in 1850. In consequence of this movement the leucocytes are enabled to penetrate blood vessel walls and enter surrounding tissues. In size the corpuscles vary, averaging ten microns. They vary also in number in health and disease. Sex and old age also play a role—they are less numerous in old age and in the female sex. In a cubic millimeter of blood we usually find ten thousand leucocytes or a proportion of one to five hundred as compared with the reds.

While leucocytes are chiefly found in the blood, they are also present in lymph—chyle, adenoid tissue and bone marrow. They may be classified in four ways:

1. As to nucleus—mononuclear or polynuclear.
2. As to protoplasm—granules or homogeneous.
3. As to origin (a) lymphocytes or small mononuclear leucocytes are found in the lymphatic glands, (b) spleenocytes or large mononuclear leucocytes are found in spleen, (c) myelocytes are normally present only in red bone marrow, but in myelogenic leucemia can be demonstrated in the blood.
4. As to staining properties—those taking acid stains are eosinophiles—those taking basic stains are basophiles—while neutrophils take neither acid nor basic stains.

The *polynucleated leucocytes* constitute the greater part of the leucocytes, as sixty per cent of all white corpuscles belong to this class, they are chiefly found in the blood—seldom in the blood forming organs. Its nucleus is at first round and of a light

color, it soon is transformed in shape, becoming kidney shaped, horse shoe shaped or embryo shaped, finally it divides into two or more nuclei, which are held together by thin strands of chromatic substance. The further the division advances the darker becomes the nucleus on account of the greater amount of chromatin present. The chromatin in the nucleus is the material that takes the basic stains. Nutrophiles show an homogenous substance when stained with cosine hematoxylin, but when stained with the triple stain, show small granules in their protoplasm—the so-called neutrophile granules.

Polynucleated eosin ophiles constitute from one to four per cent of the leucocytes. They have large granules in their protoplasm which take only acid stain. Small *mononucleated leucocytes* constitute about twenty-eight per cent of the leucocytes, they have about the same size as the normal red corpuscles, take their origin from the lymphatic glands. The nucleus forms the chief part of the cell, it is deeply colored and there is but little protoplasm around the nucleus. *Large mononucleated leucocytes* or spleenocytes constitute six per cent of the normal leucocyte number, they are larger than the red corpuscle, have more protoplasm and a lighter nucleus. *Transitional cells* with nuclei in various stages of transformation constitute from one to three per cent of the leucocyte number, they are the mother cells of the nutrophiles. The relation between polynucleated leucocytes and mononucleated ones is as two to one, hence in normal blood we find the polynucleated cells present in this proportion. An increase in the number of leucocytes is known as a leucocytosis—this is present in many acute and chronic diseases. A diminution in leucocytes is known as leucopenia and is only found in a few conditions, viz: in uncomplicated typhoid fever, primary pernicious anemia, measles and marasmus.

From a practical clinical standpoint we are interested in but three forms of leucocytosis, viz: polynuclear, mononuclear and eosinophiles. *Polynuclear leucocytosis* is

that most commonly observed, occurs both physiologically and pathologically. We have a physiological leucocytosis after the ingestion of food, lasting from one to two hours; this is due to the peptone which is present in the stomach at this time, and which has an attractive power over leucocytes. This power of attraction of leucocytes is known as chemotaxis; it may be produced by toxins and certain chemical agents. In most cases of cancer of the stomach the digestive leucocytosis is absent; this is an important diagnostic point in differentiating cancer, ulcer and chronic gastric catarrh. A physiological leucocytosis is also present during pregnancy, after cold baths, after exercise, or massage seances, or after exhibition of antipyretic drugs, strychnia, nuclein and pepsin.

Pathologically we have an increase of the polynuclear leucocytes in (1) infectious diseases. It should be remembered that an inflammatory leucocytosis is associated with a normal condition of the red corpuscles, as in pneumonia, scarlatina and acute suppurations. An inflammatory leucocytosis is one of the early signs of acute appendicitis and is a point of much diagnostic value. the same is true of typhoid fever, as its presence indicates some inflammatory complication. (2) In chronic cachectic states this is associated with a change in the red corpuscles of varying degree, these changes may be slight or severe, their number may be diminished, the hemoglobin may be lessened in amount, or the corpuscles may be irregular in size and shape.

These signs indicate a secondary anemia, which is always seen in cancer, syphilis, or after severe hemorrhage. An increase of the mononuclear leucocytes is always pathological and is evidence of lymphatic leuchemia. In other conditions as in typhoid fever, pernicious anemia, secondary syphilis and rickets, we find the number of leucocytes normal or even diminished, but there is a larger percentage of mononuclear cells or increase of them, at the expense of all others—this is known as a relative lymphocytosis.

A consideration of the *eosinophiles* is also

of diagnostic importance. They disappear from the blood in all acute infectious diseases during the time of highest fever and reappear when the fever subsides, only in scarlatina and malaria are they present during the pyretic period. They are diminished or absent in tuberculosis—this is an important sign in early tubercular cases. We find an increase of eosinophiles in myelogenous leuchemias, in asthma, urticaria, pemphigus, eczema, trichinosis, tape worms, gout and auto intoxications. A diagnosis of a leucocytosis is made for all practical purposes by examining a stained specimen of blood with a 1/12 oil of immersion lens, eye piece number two—moving the specimen about systematically on a modern stage. In normal blood we will not find present one leucocyte in each field of vision, if we find present an average of one to each field a slight leucocytosis is present.

Two to five in each field indicates a moderate leucocytosis, over five means a great leucocytosis. We should count several fields and take an average. This is the simplest method, and for all practical purposes is sufficient.

ACCIDENTAL PERFORATION OF THE UTERUS.*

BY H. E. CUSHING, M. D., CHAMPAIGN.

A thorough search through the text books and other literature enables me to find very little in regard to accidental perforation of the uterus. I find only one writer who admits having the accident occur in his practice. It is not pleasant to have such an experience, neither is it pleasant to admit it, which may, in a measure, account for the little that is written on the subject. From what has been written one must conclude that it is usually caused by the introduction, into the uterus, of a knitting needle or crochet hook in the hands of a woman attempting to produce an abortion on herself. Dr. Fairchild of Des Moines, Iowa, in a paper presented to the Western

Surgical and Gynaecological Society at Denver, December, 1903, says, "Dr. Brothers of New York has been able to collect sixty-six recorded cases of accidental perforation of the uterus, of which seventeen died and forty-nine recovered."

Diseased conditions cause so much degeneration of the uterine walls, that little resistance is offered, either to the sound or curette, when introduced into the uterine cavity. In cases of incomplete abortion, the uterine tissues often become so soft and boggy that a curettement is fraught with much danger. The sharp curette may perforate the uterus even with the greatest care, and the dull curette, while comparatively safe, must be used with special caution in these cases. A friend of mine, a skilled physician, had three suits for malpractice brought against him in two years, where patients died after curettement and postmortem examinations revealed a perforation in each case. My friend, however, had curetted only one of these but had assisted another physician in the other two cases. I have no doubt that there have been many deaths from this cause where a correct report has not been made. Irrigation increases the danger greatly by carrying septic material into the abdominal cavity. The douch-curette is especially dangerous on this account and I believe it should not be used. We cannot always tell from the enlargement of the uterus or the sound which the curette gives, the true condition of the tissues themselves. I recall a case in which I performed a tracheloraphy for a patient for whom I had done a curettement two years before, for poly-poid endometritis. I had reduced the inflammation until a very small eroded surface remained. There was little need for curettement at this time and the sound or the curette as well as the condition of the os on dilatation, revealed nothing but sound tissue except for the laceration. Yet, when preparing the cervix, large drops of pus oozed from the denuded surface, revealing a condition of general pus infiltration. Why the muscles of the os uteri did not show symptoms of degeneration, I do not understand.

*Read at the annual meeting of the Aesculapian Society of the Wabash Valley, October, 1904.

With an abortion occurring in the third or fourth month the uterus is so deep that the curette will hardly reach the whole depth of the fundus, and it often requires much courage to persist in the curettement till one is certain that the whole cavity is cleared of the septic material. If one does not curette the danger of septicaemia confronts him, while if he does the danger of perforation and almost sure death presents itself to his view. The latter risk is less than the former and is the only safe course to pursue.

Treatment: When the perforation has been caused by the patient herself, in an attempt to produce an abortion, absolute rest in bed, with the hot water bag or ice bag over the uterus is usually sufficient but if septic trouble appears, abdominal section or vaginal drainage may be required. When the accident happens in a curettement for endometritis, if no irrigation has been employed, an expectant line of treatment should be followed and we need have no fears of the result. In case of incomplete abortion, when perforation has occurred from the curette I believe that abdominal hysterectomy offers the safest course, though if the uterine tissues are not too soft and the perforation small, the opening may be closed provided abdominal section is done at once and the uterus can be cleaned out by the finger. Treatment by drainage through Douglas cul de sac with iodoform gauze drawn through the perforation is recommended by some in puerperal septicaemia, promises favorable results and this may be done with greater advantage if combined with post uterine packing of iodoform gauze as advocated, so well at the last meeting of this society, for puerperal septicaemia.

Case 1. Several years ago, I was called to see Mrs. S., who having missed her menstrual period, concluded that she was pregnant and had attempted to produce an abortion on herself. She introduced an ordinary knitting needle into the uterus, and using considerable force, she pushed the needle until it suddenly passed the whole length save only enough to hold with the ends of her fingers. Realizing that she had done more than she had attempt-

ed she withdrew the needle having to use quite a little strength and causing acute pain. I saw her soon after. I put her in bed with hot applications over the uterus and had no symptoms of inflammation or further trouble. She was about again in a few days and was not pregnant.

Case 2. Several months ago I was invited by a physician in a neighboring town to curette a patient and repair a lacerated cervix for the same. The patient was about twenty-eight years of age, the mother of three children, the oldest six years, the youngest six months. She was a neurasthenic and the operations had been advised by her physician as much for the mental effect as for the physical, and she had decided for herself that they would cure her. Careful preparation had been made for the operations. After the patient was anaesthetized, I passed a sound and found the uterus three and one-half inches deep. It was soft and boggy requiring almost no effort to dilate the os and from this very condition, I should have been on my guard. Passing over the surface slowly and carefully, with the fourth stroke of my curette on the posterior wall I seemed to meet with no resisting surface. Introducing it a little farther I still met with no resistance. Withdrawing the curette and introducing it again, I met with a resisting surface in all directions. Withdrawing the curette and introducing the sound, I found no resisting surface. My feelings are more easily imagined than described. I withdrew the sound and introducing it again I met a resisting surface in all directions. Once more I introduced the sound and found it would pass for several inches, and turning it about I could feel the end through the thin abdominal wall. I, of course, was then sure of what I had before feared, that I had perforated the posterior wall of the uterus, but I could not understand why I would find this perforation at one time and not another. Examining more closely with the sound to the patient's left, I discovered a double uterus. I was satisfied with the amount of curetting I had done, so I denuded the cervix and closed it, leaving

the canal so as to readily drain the uterine cavity and using vaginal irrigation only and that with much care. So soon as I reached my office I sought what information I could find from my books. Most authors say little or nothing about it. Pozzi speaks of having it occur to him several times. He says there should be no trouble from it if the patient has been thoroughly prepared and the instruments are aseptic but he warns especially against using any intra-uterine irrigation, as we all realize when we think of it. I had occasion to congratulate my nurse as well as myself on the preparation of the patient for there was no post-operative temperature and the cervix healed perfectly.

TREATMENT FOR FRACTURE OF THE PATELLA.

BY MILTON R. BARKER, M. S., M. D., CHICAGO.

Without mentioning the various appliances that have been devised for the treatment of fracture of the patella, we offer the profession another which in our hands has met the indications satisfactorily in twenty cases. The figures 1 and 2 illustrate the apparatus and manner of application. Fig. 1 shows the manner of application of the cast above the upper fragment which

of cast is placed a layer of cotton wadding torn in strips and applied the same as a roller bandage and applied only a little in advance of the roller bandage, see c. fig. 1. To the skin above the wadding the ends of surgeons adhesive strips are fastened the other ends are brought over the wadding and fastened to the roller bandage, see a. a. a. fig. 1. Another turn of the bandage covers the lower ends of the strip. Strips of adhesive are thus worked into the bandage over the whole length of the cast, covering as much as possible of the quadriceps on both sides and in front of the leg. The plaster is then applied over this foundation.

As the plaster is applied two pieces of bandage two inches wide are worked into the cast, one on each side of the leg and brought out of the cast in loops as shown in fig. 2. h. h. Two pulleys one on each side of leg as seen at b. fig. 2, must be attached to the loops while the loops are being made, the pulleys are thus fastened to the cast. A sash cord or small rope is fastened to the foot rest and spreader d. as shown by c. c. it is then passed around the pulley b. and fastened to the loop h. in the cast below the patella. The foot rest is adjusted to the foot by the knots g. g. and also by similar knots in the ropes on the other side of leg. To the foot rest is attached a rope which passes over a pulley i. at the foot of the bed, to which is attached a sufficient weight to hold the fragments of the patella together. The cast below the patella is applied in the usual manner without the adhesive strips.

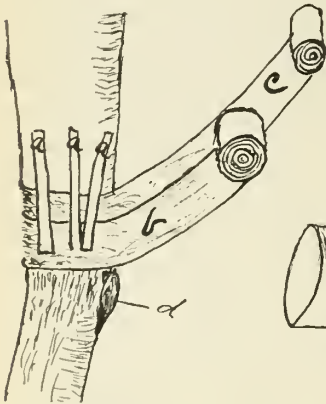


Fig. 1.

a. a. a. Adhesive strips. b. Cotton roller bandage. c. Cotton wadding bandage. d. Fractured patella.

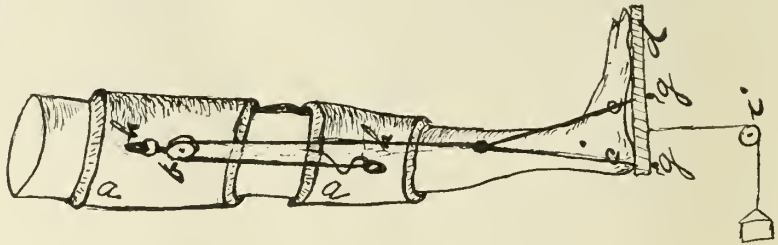


Fig. 2.

a. a. Plaster casts. b. Pulley. h. Loops. d. Foot-rest and spreader. c. c. Ropes. g. g. Knots in ends of ropes. i. Pulley.

we will explain. Beneath the roller bandage b. next to the skin over the entire length

Fig. 3 shows full size of pulley used by us which can be purchased at any hardware



St. Petersburg

Der ärztliche Besuch. Von Gabriel Metsu.

Aus Holländer, Die Medizin in der klassischen Malerei Verlag von Ferdinand Enke, Stuttgart.



store for 25c each. The ring is fastened to the pulley by a swivel.

Advantages claimed for this treatment:

1st. A large portion of the quadriceps is grasped and firmly held by the adhesive strips worked into the cast, and when the cast is pulled down the upper fragment is brought down by pulling upon the quadriceps rather than upon the upper fragments. Thus disturbance of circulation in upper fragment is prevented.

2d. The lower cast holds the lower fragment firmly so that it cannot slip away from upper fragment.

3d. The inconvenience of long posterior splint is avoided.

4th. The patient is comfortable all the time, and may be turned on his side for rubbing back or adjustment of bed-pan.

5th. The apparatus is inexpensive. Can be applied in a short time by any surgeon, and always pleases the patient.

This method we believe superior to any of the external appliances that have been used, but does not take the place of the open method with sutures when indicated, for

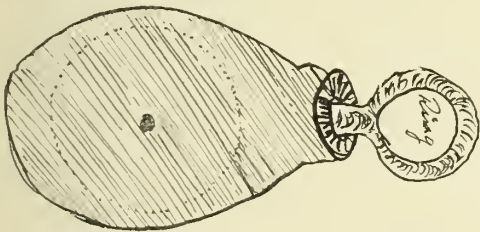


Fig. 3.

instance in stellate fractures of patella none other than the open method with suture is permissible and where the fragments are widely separated in transverse fracture with torn and lacerated periosteum the open method is one of choice. But where the open method cannot be used for any reason, for instance, objections of patient or is not indicated the above method will meet all the indications best.

4625 Greenwood Ave.

Marriages.

A. G. Fuller, M. D., Breese to Miss Holmes Thompson of St. Louis, Mo., Dec. 27, 1904.

Edw. H. Jacobs, M. D., to Miss Florence A. Quinlan, both of Chicago, Feb. 22d.

Might Be Expected.

The press association of Wisconsin recently resolved to take action to kill bills in the legislature that aim to give medical examiners the power to revoke the licenses of physicians who advertise and requiring patent medicine companies to publish their formulas on the bottles. The latter bill, it is asserted, will deprive publishers of the state of \$500,000.

Operation Without Patients Consent.

The Appellate court's decision affirming a finding of \$3,000 damages against Dr. E. H. Pratt, charged with operating upon Mrs. Parmelia A. Davis without her consent, will be taken to the state Supreme court. Judge Tuley heard the evidence in the lower court in 1897. Judge E. O. Brown of the Appellate bench handed down his opinion last Thursday. After the operation Mrs. Davis' condition became critical, and she is now a patient in the Kankakee insane asylum. The decision of the Appellate court is that any surgeon who performs a major surgical operation without the consent of the patient is liable to damages. The consent of the nearest relative does not relieve the surgeon of the liability.

St. Luke's Hospital, Chicago.

As a part of the site for its proposed addition, St. Luke's hospital has bought from Michael Cudahy the property at 1431-1433 Michigan avenue for \$27,300. The sale was negotiated by Richard A. Koch & Co. The property fronts forty feet and extends back to the alley in the rear, a depth of 159 feet. The hospital now has altogether a frontage of 160 feet, and while it is desirous of acquiring more land it may decide, if prices asked are too high, to build on the land it has acquired.

The addition to the hospital is to be, for the greater part, devoted to patients of abundant means, with the idea of using the larger part of the present hospital for charity patients.

Hospital Sunday in Evanston resulted in the collection of about \$4,000.

In the First Methodist church Dr. T. P. Frost preached on the healing of the paralytic, told of in the gospel of St. Mark. Dr. Thomas F. Holgate, dean of Northwestern university, spoke of the needs and work of the Evanston hospital. Mrs. Annie H. Sandige of Wesley hospital was another speaker. "Christ's Visit to a Hospital" was the subject of Dr. J. H. Boyd's sermon in the First Presbyterian church.

Dr. W. A. Haskell of Alton for several years President of the Illinois State Board of Health is spending the winter in Bermuda. Dr. Haskell has been an invalid for three years.

Dr. Allen, Cascade, has gone to Arkansas.

Dr. Frank Fink of Pleasant Plains has located in Springfield.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

MARCH, 1905.

NEXT ANNUAL SESSION, ROCK ISLAND, MAY 16, 17, 18, 1905.

OFFICERS:

PRESIDENT—W. E. QUINE, Chicago.

FIRST VICE PRESIDENT—H. C. MITCHELL, Carbondale.

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SECRETARY—EDMUND W. WEIS, Ottawa.

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EDITOR—GEORGE N. KREIDER, Springfield.

SECTION ONE.

Practice of Medicine, Medical
Specialties, Materia Medica,
Therapeutics, Etiology, Path-
ology, Hygiene, State Medi-
cine and Medical Juris-
prudence.

M. S. Marcy Chairman
Peoria.

Fred Zapffe,
1764 Lexington st., Chicago.

SECTION TWO.

Surgery, Surgical Specialties,
and Obstetrics.

Geo. L. Eyster.....Chairman
Rock Island.

W. H. Wilder Secretary
103 State st., Chicago.

Committee on Prevention of Tuberculosis.

J. W. Pettit, Ottawa.

C. L. Mix, Chicago.

J. F. Percy, Galesburg.

Committee on Public Policy and Legislation.

Frank Billings, Chicago.

Carl E. Black, Jacksonville.

J. W. Pettit, Ottawa.

The Pres. and Sec'y, Ex-Officio.

Committee on Scientific Work.

M. S. Marcy, Peoria.

Geo. L. Eyster, Rock Island.

The Pres. and Sec'y, Ex-Officio.

The figures before the names
of the Councilors refer to the
Councilor Districts.

The Council.

- (1) J. H. Stealy, Freeport.
- (2) W. O. Ensign, Rutland.
- (3) M. L. Harris, Chicago.
- (4) O. B. Will, Peoria.
- (5) J. Whitefield Smith, Bloom-
ington.
- (6) C. E. Black, Jacksonville.
- (7) E. E. Fyke, Centralia.
- (8) W. K. Newcomb, Cham-
paign.
- (9) J. T. McAnally, Carbondale.

THE ANNUAL MEETING AT ROCK ISLAND.

The local committees of the Rock Island profession are busily engaged in preparing for the meeting in May. A circular letter detailing the advantages and beauties of Rock Island as a meeting place has been mailed to every member of the society. We hope that our members will at once make preparations to attend.

The Section Officers again call the attention of the practitioners outside of Chicago to their remissness in regard to writing papers for the annual meeting. They have endeavored to get these members to write papers by every enticement known to them.

The success attending this effort has thus far been very meagre.

Secretary Zapffe writes as follows:

Mr. Editor: Might it not be well to place in the next issue of the Journal a notice calling the attention of the members to the fact that the program, of the medical section at least, is nearly completed, and that those desiring to read papers must make application at once?

Dr. Marcy and I have attempted to create a program that will satisfy everybody; that is, one on which all the various specialties coming within our sphere are represented; but it is a tremendous task, especially when the members outside of Chicago do not come to the rescue. We do not want to make this a Chicago program, but the lassitude of the country doctors almost forces us to fall back on Chicago.

I will consider it a favor if you will call the attention of the members to the desirability of notifying me at once if they desire to read papers.

OUR ART SUPPLEMENT.

Dr. Eugene Hollander of Berlin has recently edited a remarkable work which has been published by Ferdinand Enke of Stuttgart entitled *medicine in classical art*. This volume of 300 pages gives a review of medicine as depicted by artists in marble and on canvas from the earliest times, but is especially rich in cuts illustrating the work of the Dutch artists of the 17th century. By the courtesy of publisher Enke we are able to insert as a supplement, one of these illustrations. It is a half-tone from the oil painting by Gabriel Metsu of Amsterdam now hanging in the Hermitage at St. Petersburg and is entitled the "Doctors visit." Metsu was the most distinguished pupil of the master Gerard Dou and painted this canvas about 1650. At this time the teachings of the Arabs still prevailed and the diagnosis of disease rested solely on observation of the pulse and urine.

This work shows the elderly physician clothed in his doctors robe with his broad brimmed hat which he always wore on his head, standing at the side of a wealthy patient and holding the urine glass in his hand while he inspects its contents. A small lap dog scratches caressingly the rose colored dress of its mistress. The red jacket bound with swandown and long gold ear rings set with diamonds decorate the person of the patrician lady, showing that pride remains even though her illness might be serious. The nurse stands expectantly at her side holding a spoon in her hand. A vessel is plainly visible at her feet while to the rear is seen the bed inclosed in a canopy and curtains.

The whole painting is instinct with life and serves to give us a good idea of the methods in vogue nearly 300 years ago. Those of our readers interested in the his-

tory of medicine will find much enjoyment in reading Dr. Hollander's work and seeing its illustrations.

ILLINOIS GOOD ROADS COMMISSION.

At last the State of Illinois and mud has taken some action looking to improvement of the highways. It is surprising that our people have been content to pass their winters in mud and their summers in dust as long as they have and we venture to prophesy a marked change in this matter in the next ten years. The farmers are buying auto cars and the land is becoming valuable enough to pay for permanent improvements. Whenever we can help the good roads movement along, brethren, let us do so.

THE STATE TUBERCULOSIS SANATORIUM

Tuesday, March 7, a representative body of medical men of the State appeared before Governor Deneen and the Committee on Appropriation of the Senate and House in behalf of the proposed sanitarium for the treatment of tuberculosis. Among those present were: Drs. W. E. Quine, President; H. N. Moyer, C. E. Black and G. N. Kreider, ex-Presidents of the State Society; J. W. Pettit, C. L. Mix and J. F. Percy, members of the committee on prevention of tuberculosis of the State Society; G. W. Webster and J. A. Egan, of the State Board of Health; A. C. Klebs, A. M. Corwin, J. P. Webster and other members of the State Association for the Prevention of Tuberculosis, of Chicago; also Mr. Barney Cohen, of Chicago, representing the labor organizations of the State, and Mr. Ernest P. Bicknell, General Superintendent of the Bureau of Charities of Chicago.

Governor Deneen gave the matter an attentive hearing at 10:00 a. m. and promised to give it due consideration. At 2 p. m. addresses were made before the Senate Committee by Drs. Webster, Percy, Kreider, Mix, Pettit and Klebs and Mr. Cohen. At 3:00 p. m. the House Committee was addressed

by Drs. Quine, Moyer, Webster, Pettit, Black Egan and Mix, and Messrs. Cohen and Bicknell. The members of both committees seemed to be intensely interested in the subject, and it seems probable that an appropriation for this charity will appear in the omnibus bill.

CAN THIS BE TRUE?

The Chicago Clinie and Pure Water Journal, published now in Springfield, and apparently the personal organ of the present Secretary of the State Board of Health, printed in its February issue a remarkable dispatch which had been sent out from Springfield to one of the Chicago papers, impugning the State Board of Health and Secretary Egan.

Pure Water asserts that the dispatch originated with one Dr. Bland, who, besides practicing in Chicago without a license from the Illinois Board, is guilty, it states, of various other crimes and misdemeanors. It would seem that such charges, regardless of their origin, should be thoroughly investigated. If true, the officers accused should be punished and deposed. If false, the newspaper, regardless of its color, should be compelled to publish a retraction.

SPECIAL CARS TO PORTLAND, OREGON.

At the request of a number of members of the State Society residing in Central Illinois, the Journal has arranged provisionally for special sleepers for the Portland meeting of the A. M. A next July. The plan as now outlined is to have sleepers at various convenient points along the Illinois Central railway, say at East St. Louis, Springfield, Bloomington, LaSalle and Freeport, which will be collected into a special train and proceed to St. Paul, where others will be joined and an excursion taken through the Yellowstone National Park, afterwards stopping for carriage rides at Spokane and Seattle. The round-trip rate from Springfield as now planned will be \$53.55, but it is likely to be reduced. The excursion through the park will cost about \$49.50. Additional information regarding the excursion will be given next month.

EXAMINATION OF NON-OFFICIAL REMEDIES.

The American Medical Association, through its Council on Pharmacy and Chemistry, is about to undertake a much needed examination of new and non-official remedies. We believe that a great deal of interest and value will result from this examination, and are pleased to see it undertaken.

PETTIT THE PUSHER.

Our Missouri contemporary contains the following editorial comment on matters pertaining to Illinois:

Last May the Illinois State Medical Society presented a Symposium on Tuberculosis, which, under the able leadership of Dr. J. W. Pettit, of Ottawa, proved to be one of the most inspiring efforts which has ever been made in this direction by any society, and resulted in the establishment of an experimental tent colony for the tuberculosis at Ottawa under the direction of Dr. Pettit.

This colony has been such a notable success, and the work of Dr. Pettit has been so vigorous and far-reaching that the whole State is following in his lead and organizing for the eradication of this most prevalent of all diseases.

Through the leading men in the profession, who took part in the symposium of the State Society, and those who have been vigorously seconding this work, Dr. Pettit has been able to effect an active State organization which will push this campaign against "the great white plague" until practical results are achieved.

In order to give greater scope and authority to the remarkable energies developed in these directions by Dr. Pettit, it is proposed to make him secretary of the Illinois State Board of Health, and the new Governor, the Honorable Chas. S. Deneen, of Chicago, will be asked to recommend his early appointment.

The appointment of such a man as Dr. Pettit to this position would certainly mean a great deal for Illinois, and we trust that Governor Deneen will appreciate the advantages, not only of securing the services of such a man for Secretary of the Board of Health, but in also securing the active co-operation of the organized medical profession, of Illinois, as represented in Dr. Pettit, one of its most active and energetic supporters. The value to the State of such a consummation cannot be overestimated.

Our colleagues, across the river, in Illinois are engaged in the oft attempted and too rarely consummated effort to purify and lift up the medical branch of the State government.

For many years, and in fact ever since the days of the late Dr. Rauch, the State Board of Health and Board of Examiners in Illinois has been dominated by the politicians, and its various appointments have, it is said, been traded off in reward for county delegations instead of being devoted to their true purposes, the protection and improvement of the health of the State.—The Medical Fortnightly.

Chicago Medical Society.

The Medical Society of Cook County, Regular meetings are held every Wednesday evening from October to June at the Chicago Public Library Building, Randolph Street Entrance in the large hall on the ground floor toward West end of the Building. Membership 1512.

OFFICERS:

J. B. MURPHY, 100 State Street President
FRANK X. WALLS, 4307 Ellis Avenue ... Secretary
A. E. HALSTEAD, 2937 Indiana Avenue..... Treasurer
W. A. EVANS, 103 State Street..... Chairman Medicolegal Committee
WM. HARSHA, 103 State Street..... Chairman Membership Committee

MARCH, 1905.

Regular meeting held January 11, 1905. The President, J. B. Murphy, in the chair.

Paper by Dr. Chas. L. Scudder, of Boston, Mass., on *Stenosis of the Pylorus in Infancy.*"

Stenosis of the Pylorus in Infancy.

An analysis of all the pathological evidence to January, 1905. An analysis of the operated cases to January, 1905. A resume of the clinical story of each of these cases. A statement of the theories of causation. The disease, a surgical one in the sense that operative interference is wise in most cases. Medical treatment as demonstrated by the facts is but palliative. An analysis of the operative treatment hitherto employed. Suggestions based upon past surgical and medical treatment.

Discussed by Drs. E. Wyllys Andrews, Philip Marvel, of Atlantic City; A. J. Ochsner, I. A. Abt, Rosalie Ladova, Wm. M. Thompson, J. N. Bartholomew. Adjourned.

Discussion on Dr. Scudder's Paper.

Dr. E. Wyllys Andrews: Mr. President and members of the Society: This is an obscure and undefined subject, but it has seldom been put in more complete form than we have heard it here tonight. It is interesting to know that a large proportion of these cases have come out of the English and American clinics, in contrast to some of the beautiful results of other forms of gastric surgery emanating from the German and French clinics.

It is true, clinically speaking, that we can divide these congenital cases into the mild and the severe types. Of the first, we know comparatively little, and we never can learn very much about them, except by deduction, since we get neither operation nor autopsy. Of the severe cases, it must be admitted that a very large proportion of them have a mechanical atresia, a structural obstruction of the pylorus. It has been believed by a number of investigators that this obstruction begins below the

pylorus, in the upper duodenum, and is due to ulcer in fetal life, being identical with conditions which produce cicatricial contraction in adult life.

Rosenheim believes that the majority of cases of benign pyloric stenosis take their origin in a congenital change, a statement in which the majority of surgeons would not be willing to concur; yet from the very early age at which some cases of chronic stenosis begin, there may be some truth in it. I refer to the type of individuals, anaemic, cadaveric, from malnutrition, whom we often cure by gastric surgery. These patients give a history of trouble dating from birth, in some cases. Some times more than one member of a family is so affected. At the present time, Dr. Abt has three cases under observation in infants. Two of these I have seen, and on one I operated upon. It is altogether likely that we will have to take over into the surgical domain a certain number of these types of infantile conditions.

Congenital pyloric stenosis is, as Dr. Scudder points out, often due to spastic contraction, and hence is functional. Later it becomes structural by forming a hypertrophic benign muscular tumor or ring. I do not agree with him that all the recorded cases are of this spastic type. I have one specimen which will barely pass a 2 mm. probe, and has no tumor whatever, but only hour-glass contraction.

Dr. Rosalie M. Ladova: I have a case which suggests this condition. A few days ago I was called to see a child 5 months old, which had been vomiting since birth immediately after nursing. The mother said that she had made a faithful effort to feed the child properly, and the physician preceding me did all he could, but the results were negative. The child is restless, wakeful and hungry, nursing with great avidity.

On examination I found the child well nourished, of good size; the abdomen was

moderately distended and tympanitic. I did not notice any peristalsis nor any tumor. Phymosis was present. The bowels were rather loose, but there were no signs of malnutrition. I concluded to try medical treatment for a while and more regular feeding. I also advised operation for the existing phymosis, thinking the vomiting may be of reflex origin.

I am glad to have heard this paper, as it will put me on my guard as to the possibility of a stricture of the pylorus in progress, and will aid me in the management of this case.

Dr. I. A. Abt: This paper has been of great interest to me. It is an encouraging sign that the great mass of the profession are beginning to interest themselves in the pathology of infants and young children, and are seeking new methods of treatment. The essayist has treated exhaustively pyloric stenosis in infants, and little remains to be said. One point may be emphasized, viz: the differentiation of cases of pyloric stenosis from those of simple dyspepsia. In pyloric stenosis the vomiting is the most marked symptom; it is almost incessant. The vomiting, together with the extreme wasting, a palpable tumor in the region of the pylorus and retrograde peristaltic movements stand out in contradistinction to the occasional vomiting, and singultus of dyspepsia, meteorism and undigested stools characterize the latter disease. It is important to insist sharply upon this differentiation, if we would avoid a tidal wave of surgery, which would claim all of our dyspeptic babies.

The case which Dr. Wyllys Andrews has already referred to was one of the cases that I have had under observation for some time. The history states that the baby had vomited since birth. It was marantic and extremely feeble, although it had been breast fed. The mother had an abundance of milk, and was feeding the baby properly; nevertheless, it did not prosper. When the baby came under my care at the hospital, I prolonged the intervals between feedings and cut down the amount of food; but still it continued to vomit and lose in weight. I may say, too, in passing, that the milk was analyzed and was found normal in composition. After several weeks of breast feeding, which did not succeed, I tried other methods of feeding, without any change in the infant's condition. The stomach was washed out daily, without noting any improvement in the baby. I inflated the stomach to determine its size, but it never descended below the umbilicus, nor did I feel a pyloric tumor. In order to make a more careful examination, I anesthetized the child, without, however, making any additional findings. The stomach contents were examined, and it was found that hydrochloric acid was absent. The child vomited continuously, until the day of the operation, and it was reduced almost to a skeleton. At the time of operation it was 4½ months old. Dr. Andrews performed a very rapid and skillful gastroenterostomy, though the child succumbed in 24 hours. Subsequent

examination of the stomach showed that the musculature of the pylorus was hypertrophied and that the lumen was very narrow. A fine platinum needle, such as is used in bacteriological work, passed through the pyloric lumen with difficulty.

There is another infant at the hospital at the present time, under my observation, that presents symptoms similar to the one which has just been cited.

Another case came under my observation when it was three weeks old. It began to vomit all its food. The temperature was slightly elevated and varied between 99½ and 100 degrees. On the eighth day of the baby's illness the vomiting became more pronounced, the vomitus consisting of milk and thick mucus. The pulse was weak and irregular. All food apparently having disagreed, a wet nurse was procured. It was noted that the child lost in weight, that the abdomen was tense over the epigastric area there was paroxysmal peristaltic motion, which seemed to proceed from the cardiac to the pyloric end, and as the wave reached the pylorus, it seemed to meet an obstruction and ceased suddenly. This was sometimes followed by a recoil of the wave. This increased peristalsis was accompanied by pain and sometimes vomiting.

Palpation revealed a slight globular mass in the region of the pylorus. The child nursed, though it continued to vomit almost after every feeding. On several occasions the baby went into collapse, though it rallied after stimulation. After some weeks, the vomiting became less, the baby rested more quietly, and the stool became more nearly normal. On the twenty-second day of the illness the baby weighed 9½ pounds, and on the fifty-fourth day of the illness 10 pounds. After this time she became bright, and the tumor in the region of the pylorus could not be felt.

It has been maintained by not a few that in some of these cases there exists a spasm of the pylorus. This may gradually disappear, and in this way the spontaneous cures that have been recorded may be explained.

It is important to emphasize that if operations be undertaken on these young babies, less shock is sustained if they are kept warm while on the operating table.

Dr. Philip Marvel, Atlantic City, N. J., (by invitation): I seem to have arrived in Chicago at an opportune time. Many interesting things are going on here now, and this paper is in no way an exception. I have been particularly interested in it from a medical standpoint.

There are three points in the paper which every surgeon should emphasize: **First**, the diagnosis of the case. **Second**, the diagnosis of the surgeon who is to perform the operation. **Third**, the diagnosis of the physician who is to take care of the case after operation. Too much stress cannot be laid on these three points.

A few cases have been regarded as cured, as was brought out by Dr. Scudder, and, as

Dr. Andrews said, some of these cases will be allowed to go without operation, and, possibly, the patient will lose his or her life because of the ignorance of the physician in charge. If a suspected case is presented to the physician, and he is in doubt as to the diagnosis, he ought at once to summon a capable surgeon to assist him in the diagnosis, and as well, in the subsequent management of the case.

I wish to refer briefly to a case which belongs to the practice of another physician, and which will be reported later. This case presented one condition not mentioned by Dr. Scudder, and that was a hemorrhage into the pancreas. The child began vomiting at the age of three days, after having first nursed, and lived until the fifth day. The autopsy revealed the conditions mentioned by Dr. Scudder, of the pylorus in these cases, and also the fact that the head of the pancreas was hemorrhagic. Blood was observed twice in the dejecta.

Dr. J. N. Bartholomew: We must not conclude that every baby that vomits and is emaciated has pyloric stenosis. It seems to me that the chief diagnostic point would be vomiting beginning at or soon after birth, associated with rapid emaciation, constipation and the presence of a tumor in the region of the pylorus. The other symptoms are frequently found in other conditions.

I wish to report a case that had all the symptoms well marked, minus the tumor. The child began vomiting on the third day, associated with constipation, and it vomited continuously until it was three weeks old. Emaciation was extremely rapid. We concluded that the mother's milk was not suitable because the mother had a goitre. We substituted artificial feeding, on which the child recovered rapidly.

This case might easily have been mistaken for one of pyloric stenosis, because all the symptoms were present, except the tumor.

Dr. A. J. Ochsner—I wish to add my praise of this paper. We certainly are greatly indebted to Dr. Scudder for having brought this subject before us. Now that stomach surgery has appeared on the scene and is doing so much for the adult, it seems to me that it also holds out much of promise for these little ones, especially as Dr. Scudder has shown when one-half of them can be saved by operative interference.

I have seen but one case, and that refused operation. Dr. Scudder has covered the literature so thoroughly that there is nothing for me to say. I consider the paper a very valuable one.

Meeting of January 18, 1905.

A regular meeting of the Chicago Medical Society was held Jan. 18, 1905, with Dr. Wm. S. Harpole in the chair.

Papers were read as follows:

1. **Demonstration of a Case of Mediastinal Tumor**, by Dr. Melville G. McHugh.

2. **Chloride Retention in Nephritis**, by Dr. Joseph L. Miller.

3. **Normal Salt Solution and Other Local Analgesics in the Office Treatment of Anorectal Diseases**, by Dr. J. R. Pennington, which was discussed by Dr. Rosalie Lalova.

4. **Nitrous Oxide Anesthesia**, by Dr. Bertha Van Hoosen.

Adjourned.

Mediastinal Tumor.

By **Melville G. McHugh, M. D.**, Chicago, Ill.

We have several reasons in presenting to you this mediastinal growth due to aberrant thyroids:

1. Because it is multiple, large, and wide-spreading.
2. Because of its size and peculiar position in the mediastinum, we would ordinarily expect grave symptoms.
3. Because of the entire absence of symptoms.
4. Because of our hypothesis attempting to explain the absence of symptoms.

Frequency. Aberrant thyroids are more frequent than ordinarily supposed, being commonly found in some animals. (Rabbit.)

In the Human Subject, Zuckerkandl, in 200 autopsies, found 57 in which there was one or more aberrant thyroids.

Gruber, in 300 autopsies, found 23.

Kadyi, in 68 autopsies, found 10.

Strukeessen, in 130 autopsies, found 36.

As a rule, they are not of large size, and rarely give rise to symptoms, unless they are in a location where small growths readily cause obstruction. On the other hand, some very large growths have been reported, one of which weighed 100 grams, and another which occupied the entire right pleura.

Location and Distribution.

1. They are especially prone to occur in the neck.
2. They may be distributed over a wide area. They may be found anywhere from the aortic arch to the epiglottis, or all around the great vessels of the neck, or the larynx, or trachea, or at the root of the tongue. As a rule, they are disconnected, excepting those springing from the isthmus, which are usually pedunculated, and pass downward, under and to the right side of the sternum.

3. Substernal growths may be situated anywhere behind the sternum, to the aortic arch.

More rare are those occurring between the esophagus and nerve roots; the retro-pharyngeal, esophageal, and less frequently still, the so-called retro-visceral, described as being between the pleura and spinal column.

Effects. These glands are subject to the same changes as occur in the normal gland, therefore, aside from the pressure symptoms which they may exert, depending upon their location, they may also produce goiterous symptoms.

Histology. Struma of these tumors may be fibrous, parenchymatous, vascular, or cystic,

or combinations of these, as may take place in the normally situated gland.

The size which they might attain before giving rise to obstructive signs or symptoms would, as you can readily see, depend largely if not entirely, on their location, as we hope to demonstrate in the present case.

History. In this case the chief interest is in the size and location of their growth on the surface of the heart, around the great vessels, and yet it produced no subjective symptoms. This, as you will see, was due to the peculiarly favorable position of the growth to the heart and surrounding viscera.

Patient. P. P., 62; female; colored; married, and had children. Has been an inmate of the Cook County Infirmary for twenty years, and as far as we can ascertain, never suffered from any symptoms of thoracic pressure.

No edema; dyspnea; cyanosis; pain, or cough; nor any symptom due to struma from thyroid growths. No tremor, nor exophthalmos. And yet post-mortem, to our surprise, we found the following:

Post-Mortem Findings. On opening the thorax we found the heart displaced downward, backward and to the left by this large mass, which occupied the anterior and superior mediastinum. Its outer surface is free, excepting at the upper extremity, it being attached to the right sterno-costal articulation, to the right pleura and chest wall. From this point it extends downward in an oblique manner to the left fourth rib, where, on its under surface, it is attached to the ventricular pericardium. Above it we find another large pedunculated mass, springing from the isthmus of the normal thyroid gland. The right pleura is firmly adherent throughout its entire extent, while the left pleura and pericardial layers are free from adhesion. The presence of the right, and the absence of the left-sided adhesions, in our mind, play an important role in explaining the want of symptoms.

Description of Tumor. The tumor is kidney-shaped, occupying the superior and anterior mediastinum. It extends in an oblique manner from right to left. The upper end is to the right, while the larger or lower end is downward and to the left. It is encapsulated. It measures 14.3 cm. in length, 7.8 cm. in breadth, and 5.6 cm. in depth. The capsule is rather smooth on its anterior free surface, and not unlike pericardium in appearance. On its posterior surface it is adherent to the pericardium within 2 cm. of the apex. At its upper inner margin it is grooved where it crosses the vessels. In this place the capsule blends with the adventitia and surrounding tissue, but, as you will notice, distinct constricting bands are wanting. On its upper and outer surface it is adherent to the right pleura and chest wall. The capsule peels readily, leaving a rather lobulated vascular surface.

On section, the gland cuts firmly, rather fibrous. The cut surface is mottled red, with here and there whitish, opaque areas of calcareous infiltration.

The surface is rather cellular in appearance, and exudes but little blood.

The other specimen is of the pedunculated type, springing from the isthmus above. It measures 3 inches in breadth, 2 longitudinally, and 1½ in depth. In its pedicle it presents another smaller growth, about the size of a marble, while on the outer surface of the right lobe of the thyroid proper we find two more growths of about the same size.

Microscopically, they prove to be of the colloid type of thyroid. You will see the new glands, the lumen of which is filled with colloid material.

Theory. In attempting to explain the lack of symptoms in this interesting case, we make use of:

1. Its location. As you remember, the bulk of the growth lies in the anterior mediastinum, on the ventricular surface of the heart, below the great vessels. Its pressure on the ventricles pressed the heart backwards, and pushed the superior and inferior vena cava out of harm's way.

2. The favorable presence of adherent pleurisy on the right side, and want of pericardial or pleural adhesions on the left side. Allowed compression of the left lung by the heart, while the adhesions on the right side during each inspiration opposed further displacement to the right.

3. The anterior surface was free; the pericardial surface, on account of the absence of adhesions, was relatively so, while with the upper fixed end moving outwards and to the right at each inspiration, as you see, gave a comparatively movable growth. Suspended, if you please, by hinge-like adhesions at its upper extremity, its lower free extremity could move backwards and forwards. At the same time the pleuro-capsular adhesions limited lateral motion and compression to the left, because each inspiration would pull the tumor to the right.

4. The bulk of the growth, being low on the ventricular surface, probably acted as a wedge, lifting the heart upwards, thereby relieving pressure or tension on the auricles and great vessels.

The most important physical factors were:

1. Location and shape of the growth, bulk downwards.

2. Hinged attachment, and anterior free surface.

3. Cardiac suspension (hinge), and movements not being interfered with by other than pleuro-capsular adhesions.

4. The presence of traction to the right, due to pleuro-capsular adhesions.

5. The absence of left-sided adhesions, which allowed of displacement and compression to the left.

Normal Salt Solution and Other Local Analgesics in the Office Treatment of Ano-Rectal Diseases.

J. Rawson Pennington, M. D.: Recent discoveries and improved technique in the use of local analgesics has enabled us to treat many patients, suffering from various forms of minor

ano-rectal diseases, as ambulatory cases which we formerly sent to the hospital for treatment. This oftentimes obviates the necessity of putting aside all business and social obligations and contracting a two or more weeks' stay in a hospital with all its attendant anxieties and embarrassments which are frequently associated with such functions. Such patients, with few exceptions, we now operate upon at our office or the patient's home. Before operating, if there are no contra-indications, about the only question we ask the patient is, Did your bowels move to-day? If so, and an operation is indicated, or necessary, and the patient so desires, we prepare the field and proceed at once to operate, using either a normal salt or eucaine-adrenalin solution as the analgesic.

In my first experiments, some years ago, I used cocaine as a local analgesic. The toxic effects of this drug were in many instances so alarming that I discontinued its further use. Recognizing, however, the great advantages and utility that a satisfactory local analgesic would afford in treating many of these cases, I continued my investigations and experimentations along these lines.

Should it be desirable, as it is in some instances, especially where the injections must be made into the deeper tissues, and the operation necessarily prolonged to secure the specific action of some drug, as eucaine or cocaine, alone or in combination with the distension of the tissues, I then add a small quantity of eucaine lactate and adrenalin chloride to the salt solution.

To make the normal salt solution, put into an Erlenmeyer or Jena glass flask $3\frac{1}{2}$ oz. (100 C. C.), or distilled water and 11.5 grains (.75 gm.) of chemically pure sodium chloride. Boil for two or three minutes, and when cooled to blood heat it is ready to use. To make the eucaine-adrenalin solution, add 3 gr. (.2 gm.) of Beta-Eucaine Lactate to the water, at the same time the salt is added, and after boiling and cooling to the body temperature, add 10 drops of adrenalin chloride solution, and it is ready to use.

The cases in which I have successfully employed one or the other of these solutions to produce local analgesia include radical operations for protruding and non-protruding internal hemorrhoids; interno-external, thrombotic and cutaneous hemorrhoids; polypi, anal prolapse, fistula, fissure, ulceration, abscesses, sacral dermoids, lipomas, condylomatas and secondary operation for colostomy.

Technique. This depends more or less upon the nature of the operation to be performed. In internal hemorrhoids the salt solution is injected directly into the tumor until it becomes white, when it is grasped with a pair of forceps and the mucosa carefully divided down to the mucosa; this tunic, which contains the principal blood vessels, is then ligated with a very fine linen ligature and the major portion of the tumor cut off. As the lymphatics and circulating blood rapidly remove isotonic solutions from living tissues, the anesthesia is of short

duration and the operation must be performed very quickly. In polypi, the salt solution is injected into the base of the pedicle, a ligature thrown around it and the tumor cut off.

Interno-external piles are treated similar to the internal variety. In prolapsus ani the injection is made into the mucosa and deeper structures, sections of these tunics are then ligated and cut off.

In cutaneous hemorrhoids, the skin is first anesthetized, then its central portion. The tumor is then removed with a sharp knife. I say knife, because I have observed that scissors are more apt to cause pain than the scalpel. In all cases requiring deep or extensive operations the skin should be carefully and thoroughly anesthetized first, and then the deeper structures. Very fine needles are used for the skin, coarser ones for the subcutaneous tissues, and for the deeper structures still larger ones, which are blunt and with holes in the side to avoid injury to vessels. It is important that the solution be warmed to the body temperature. Rapid injections should be avoided, as sudden distension of the tissues may be painful. For the same reason neither solution should be used when cold or too hot. Strange as it may seem, most cases complain of but little pain on the days after the operation. In fact, they have much less pain than after taking chloroform or ether, to say nothing of the suffering experienced by some in coming out from under the influence of the anesthetic, and the healing process seems to be much more rapid and satisfactory. This is probably because the resisting power of the patient has not been lowered with a general anesthetic.

I have operated on about 75 patients under local analgesia. The aggregate amount of pain has been much less than in a similar class of cases operated on under general anesthesia. In some instances the pain was quite sharp for a few moments, but nothing in comparison with the pangs, anguish and writhings occasionally seen in patients after the ligature operation for hemorrhoids under general anesthesia.

Dr. Rosalie M. Ladova: I wish to put myself on record as having witnessed an operation by Dr. Pennington in which he resorted to sterile water anesthesia. The case was one of hemorrhoids, and four tumors were removed. There was slight pain accompanying the injection of the sterile water, but it was no more apparently than would occur from cocaine anesthesia. Three of the tumors were removed without any inconvenience or discomfort, while one of them caused slight discomfort in its removal, due doubtless to faulty technique.

There was another physician in the office at the time, who had been operated before, and he stated that the operation was almost painless, and he felt very much gratified over the result.

It stands to reason that sterile water will produce local anesthesia when we consider the principle. Local anesthesia is produced by a local ischemia, which affects the nerve endings, whether the ischemia is the result of pressure, as is the case in subcutaneous or submucous

injection, or of the freezing process. The operation that Dr. Pennington did for hemorrhoids was about as nice an operation as I have ever seen.

Meeting of January 25, 1905, President Murphy in the chair.

The following papers were read:

1. **The Therapeutic Use of the X-Ray; Three Years After.** By Dr. W. A. Pusey. Paper not submitted.

2. **The Treatment of Lymphatic Leukemia with the X-Ray.** By Drs. J. A. Capps and Joseph F. Smith.

These two papers were discussed jointly by Drs. Oliver S. Ormsby, E. A. Fischkin, R. R. Campbell, David Lieberthal, and Pusey.

3. Paper by Dr. H. J. Burwash, entitled **A New Method in the Administration of Oxygen Gas.** (Paper herewith.)

A New Method in the Administration of Oxygen Gas.

H. W. Burwash, M. D.: Mr. President and members of the Chicago Medical Society. While the method for the administration of oxygen gas, of which I shall treat to-night, is entirely original with me in the sense that it was evolved by myself without having been suggested from any other source, yet in making some researches since handing in the title of this paper, I have learned that I have been preceded in the use of the method and that the title is a misnomer. I shall therefore be obliged to apologize to Dr. W. H. Kellogg, of Battle Creek, Mich., and to this Society also.

"**Oxygen Gas per Enema**" was the title of a paper read by Dr. Kellogg in 1887 and again in 1888. As that is the method I offer you to-night, it cannot be regarded as "a new method," though the diseases in which I have used it are not those in which its use was suggested by Dr. Kellogg.

Dr. Kellogg's paper is reported in the *Therapeutic Gazette* of Sept. 15, 1887, and again in the *Journal of the American Medical Association* in 1888. In that paper he discusses at length and with much learning, experiments on the Guinea pig, showing that gas per enemata is readily absorbed and that dark venous blood was noticed to be immediately changed into bright arterial blood by its application. He therefore recommended this method for the treatment of diseases of the liver and digestive organs. He reports many, cases nearly all being of digestive troubles. While the method is not new, so far as my researches have extended, I have made a new application of it by using it in the treatment of the acute respiratory diseases, particularly pneumonia. This method was first used by me in August, 1891, in a severe typhoid fever case, after failing to resuscitate the patient by the usual method by inhalation. The case was a young girl about 16 years of age. From the persistent high temperature, she became profoundly toxic, delirious and cyanotic. The gas by inhalation did not appear to revive her from the stupor, and

then it occurred to me to administer the gas per enema. I gave her one gallon. After two minutes duration, the respiration became more exhilarated, and the deep cyanosis turned to a beautiful pink condition. That patient recovered after a very protracted illness. Dr. Brown and the late Dr. Knox both saw this case repeatedly with me in consultation. Since that time I have continued to use oxygen per enema, and in all my critical cases, especially pneumonia. Of special interest I might mention two recent cases of pneumonia. The first was that of Mr. K., aged 35 years, brewery worker, developing a double pneumonia apex on the one side and base on the other, in which the temperature varied from 103° to 106°, rectal. The toxæmia increasing as a result, the patient became delirious with extremely rapid respirations and weakened heart. About the sixth day of the disease the oxygen gas was used, after the usual cold bath had been administered, which was necessary to reduce the high temperature. The bowels were first thoroughly evacuated by normal salt solution. The gas was administered for from 1½ to 2 minutes' duration hourly until the condition indicated the relief desired. At each administration about one gallon of the gas was consumed, though the amount used was determined by the patients' condition rather than by measure. Immediately following each administration the usual physical phenomena appeared. In this case the high temperature continued until the eleventh day, when the crisis appeared and thereafter he continued an uninterrupted recovery. The administration of gas was continued until the heart's action was assured.

The second case was that of Mr. B., a broker, aged 30, addicted to the use of stimulants and tobacco, developed pneumonia following grip; temperature persistently high from the beginning, rendering cold baths necessary. The crisis came on the tenth day. Oxygen gas was administered per enema from the seventh day, with results as in the other cases, followed by recovery.

Why does oxygen gas administered by the intestinal canal oxygenate the blood and tissues so much more efficiently than when given by inhalation? It is plainly apparent that the introduction of a large quantity of oxygen gas into the intestinal canal not only neutralizes and deodorizes the noxious gases that are frequently present there, but also by this direct method introduces oxygen through the portal system to the liver, whose cells are not only stimulated to greater activity, but are nourished as well. Besides this the already overcharged lungs are assisted in their function of aeration of the blood by this additional reinforcement.

Dr. Walter M. Fitch: I have used the method described by Dr. Burwash in quite a number of cases, but have abandoned it recently on account of its inconvenience more than anything else. I would like to confirm everything he has said about its efficiency, es-

pecially in clearing up and improving the condition of toxemia due to intoxication of the portal system.

Dr. E. A. Fischkin: Since I have been using the X-Ray as a therapeutic agent, I have treated several hundred cases, embracing a variety of conditions covered in the domain of dermatology. With but few exceptions my cases have been purely dermatological, that is, the affection has been confined to the skin or subcutaneous tissue. In these cases I have had the same experience and results which Dr. Pusey has reported in his paper, and Dr. Ormsby in his discussion. I can offer, therefore, but little new and will add only a few observations which were not mentioned by the previous speakers. For instance, in *acne*, as Dr. Pusey has told us, the X-Ray is undoubtedly the best treatment, and I employ it now in preference to all the other methods of treatment. But I have seen conditions which make me now hesitate to apply the X-Ray treatment indiscriminately to all cases of *acne*, especially in tender, anemic skins, where the suppuration is not marked, where the nodules are not deep, where there is only a slight disturbance in the sebaceous glands, perhaps a little hyperkeratosis around the follicular orifices. In three such cases I have seen some untoward and unpleasant results after the treatment was finished. It takes two or three months, with thirty or forty treatments, given three times a week, in order to obtain good results. In about eighty cases thus treated, the *acne* had disappeared entirely, the skin became smooth and velvety and other organic disturbances, often accompanying *acne*, have disappeared. But in the three cases mentioned, which have shown at the start the same conditions of improvement, there appeared several months later a condition which I would call a scaling dermatitis, that is red, somewhat elevated scaling patches, resembling dry patches of *rosacea eczematosa*, which were not amenable to any treatment afterwards. In regard to the treatment of *acne* I would add that I have seen good results by combining the X-Ray treatment with other methods. I have learned this from a young lady, a school teacher, who had an indurated *acne* of seven years' duration. She said that she had but one month to spend in Chicago, and that she wanted to be cured in that time. She urged me to expose her to strong daily radiations, expressing her readiness to assume the risk. I have declined this proposition, but have combined the usual X-Ray treatment with applications of very strong (50% Resorcin) exfoliating pastes. She was cured in four weeks and continues to be free from *acne* now for over two years. Since then I have repeated this combined treatment several times in cases of *acne* as well as in other dermatoses, as for instance, *psoriasis*. In the latter I have noticed a more rapid improvement and disappearance of the patches when I used chrysarobin at the same time over the surface.

In *eczema* I have experienced very good results in chronic cases where there is infiltration or exudation, especially as mentioned by Dr. Ormsby, in chronic forms of trades-eczema or

eczema manuum. But all the other forms of chronic *eczema* do well under X-Ray treatment. The indication for this treatment are all morbid conditions where there is infiltration or formation of new tissue.

I have under observation at the County Hospital a very large *keloid*, which is reacting beautifully to the X-Ray. It is a case of a seemingly false or secondary *keloid* which has appeared first after an injury, but has reoccurred each time in larger size after surgical removal. The growths are now shrinking considerably under the X-Rays.

Of the other dermatoses I will say that cases of *sycosis* react beautifully to the X-Ray treatment. I treat *sycosis* by the X-Ray only, without any other application.

There are a few failures, but these failures are not always the result of misapplied treatments or of faulty technic. It seems to me that there is a decided idiosyncrasy in different patients. I wish Dr. Pusey had spent more time on the treatment of various dermatoses than he did, that he had discussed them in such details as he did in discussing *carcinoma*. I would like to ask him to tell us about the untoward effects he had experienced and how he treated his cases at the start for the purpose to avoid these effects. There are no reliable methods of measuring the rays. We have to rely on our judgment entirely, and we have to be careful in treating each individual case. I wish he would tell us more about his experience in regard to the different susceptibility of patients to the X-Rays. I have had one experience like this: I have treated two patients with *psoriasis*, a brother and a sister, who have contracted the disease at almost the same time, who showed the same form of the disease and gave the same history otherwise. They were given the same treatment. The sister was cured after eight or ten treatments, and it is now about two years since her last treatment was given, with no recurrence. The brother is still sick. He continued this treatment for a very long time, but the *psoriasis* is relapsing in increased severity. This case illustrates that there is a decided difference in the reaction of patients to the X-Ray.

I have a case now at the County Hospital of a deep *rodent ulcer* which is yielding to X-Ray treatment. I was somewhat surprised in seeing the assisting interne, who has treated this case some eight weeks before I resumed my service, applying the tube almost one inch from the face without any precautions being taken to cover the healthy parts, which still remained healthy and showed no reaction to the X-Ray. But the interne told me that while the carcinomatous growth is yielding to treatment, the healthy skin of his man shows no reaction whatever to the X-Ray. He has, for the sake of experimentation, exposed the hand of the patient for weeks to strong rays, having the patient hold his hand on his face during treatment, without any reaction. But in other patients, as we know, slight exposures to X-Ray treatment will produce a severe dermatitis.

Dr. R. R. Campbell: I want to congratulate

Dr. Pusey on his most excellent paper, as well as the Society in hearing an experience which is most valuable to us all. This paper, coming from, as I believe, the pioneer in X-Ray work in Chicago, conducted most carefully and upon scientific lines, as we know Dr. Pusey has conducted this work in his laboratory, the statistics set forth by him to-night are invaluable to the profession. I congratulate him most heartily upon the results he has obtained. There is one thing I regret that he did not discuss, and that is the technique and the improved handling of the X-Ray. In other words, I think it would have been within Dr. Pusey's domain to have tried to impress upon the profession that the X-Ray is not a toy. It is not to be handled carelessly; it is not to be handled indiscriminately, neither is it to be handled by men who have never had any experience with electricity, or who have never been minutely and properly instructed in the use of the X-Ray.

In two cases of blastomycosis which I have seen and treated with the X-Ray without the administration of iodide of potassium, my results have been the same as those of Dr. Pusey's.

In epithelioma of the lip, the cases I have selected for X-Ray treatment are those of the superficial type. In two cases out of twelve in which there was some slight induration, I failed to get any beneficial results from the X-Ray. I believe that when we have a case of epithelioma of the lip in which it becomes necessary to curette, the domain of the X-Ray ceases, and the case properly belongs to surgery.

In cases in which there is any glandular involvement, where surgical interference is at all feasible, I never suggest the use of the X-Ray.

The point was brought out by Dr. Pusey as to the tolerance of the X-Ray by some patients, and idiosyncrasies to it in others. This has been lost sight of many times. In cases of tuberculosis verrucosa cutis we may have to struggle for several weeks to bring about a dermatitis, which in this class of cases is necessary.

In lupus erythematosus my results have not been satisfactory with the X-Ray. In lupus vulgaris, however, I believe the X-Ray is eminently the best means of treating this form of tuberculosis which we have yet experienced, for the reasons that have been pointed out by the essayist.

In acne my experience has been most gratifying. Three years ago I published a series of cases of acne treated entirely by the X-Ray to the exclusion of all other treatments, in which the results obtained were highly satisfactory, and which I am happy to say have been permanent.

Dr. David Lieberthal: It is now about three years since Dr. Pusey read his first paper on X-Ray therapy before this Society, and reported very favorable results in some cases of inoperable carcinoma. From that time a great deal of enthusiasm prevailed, and all kinds of carcinoma were subjected to the X-Ray, and in many cases valuable time for operation was lost. Fortunately, we are awakening to the

realization of the fact that only certain cases are suitable for the X-Ray. When a diagnosis of deep carcinoma is made, it seems to me that the surgeon is the man to deal with that case, and in inoperable cases the X-Ray will be the treatment of choice.

In superficial carcinomas, epitheliomas, especially those developed through degeneration of senile warts, and in rodent ulcer, the X-Ray produces good results, to which I can attest, although I am not in favor of treating epithelioma of the lip with the X-Ray, and usually refuse to so treat such cases. I have treated one case only, and this at the urgent request of the doctor who referred him to me.

Regarding the results obtained in purely dermatological cases, I can corroborate what the other gentlemen have just said. I wish only to distinguish in acne rosacea between those forms where diffuse hyperemia and infiltration are continuous; and those with circumscribed patches beset with pustules, with intervening normal skin. In the latter type the results are better.

I wish to mention the excellent results obtained in ten cases of ringworm of the scalp, which I reported in a discussion two and a half years ago. An average of eight to ten treatments sufficed to cure them.

Dr. Oliver S. Ormsby: As our experience with radiotherapy has been limited almost entirely to cutaneous diseases, it is only to the dermatological side of the papers that I shall refer. I have been very much interested in Dr. Pusey's excellent paper, and in the remarks I shall make I do not think that I shall be able to add anything new to what he has said, but rather add further testimony to the valuable and scientific work he has done.

Dr. Pusey said very little about the technique, so I judge that he employs the same that he advocated in his earlier work. We find that to-day most of the gentlemen employing the X-Ray as a therapeutic measure are using practically the same technique that they did three or four years ago, which is one of the strongest evidences, to my mind, that radiotherapy was early established on a firm basis.

There are a number of affections that come to the dermatologist that can be relieved very well by means of X-Ray, and just a few of these I should like to mention. Most of the cases I shall refer to have occurred in the practice of Dr. Hyde and Dr. Montgomery, and all were treated in their laboratory. One of the most important subjects has been the treatment of epithelioma by means of X-Rays, and the observations we have made extend over three and one-half years, and cover more than two hundred cases. The cases that have been relieved most perfectly are those already mentioned by Dr. Pusey, and which are generally recognized as superficial epithelioma of the rodent-ulcer type. In these cases we have practically had no failures, and the results have been uniformly good. In two cases, however, a mild recurrence has taken place, which was soon relieved. Where time is a factor, we have the hard epitheliomatous border curetted first, following this

with the X-Rays. Usually this is unnecessary, but it saves time for the patient. As to the lip cases, our experience has not been very extensive. We have treated nineteen cases of superficial epithelioma of the lip. We practically never attempt to treat deep lip cases, but we find this an ideal treatment for the superficial ulcerations and the pre-epitheliomatous hyperkeratoses that occur in this situation.

In more than one hundred cases of psoriasis, we have found radiotherapy a clean, efficient and convenient method of local treatment, but it is not selected in all instances. There are a few points in this connection that are of interest. We rarely treat psoriasis of the scalp on account of the danger of removing the hair. However, some patients insist on having such treatment, and we have occasionally used it. We have found psoriasis of the scalp can be removed with mild treatment without removing the hair. Relative to dosage of X-Rays and difference in results, the following case is of interest: We had a patient last March suffering with psoriasis, who received four (three-minute) treatments with X-Rays, with the result that all of the lesions were removed. This year, the first of January, we received a letter from her stating that she had received twenty-one treatments of ten minutes each during one and one-half months by a physician without any relief. We have seen in the areas formerly occupied by the lesions of psoriasis marked telangiectases in two cases treated by us and in several cases treated by others. Usually this occurred where a dermatitis had been produced, but in one case it occurred where repeated treatments were given for recurring lesions without the production of visible dermatitis.

In more than one hundred cases of acne and twenty-one cases of acne rosacea our results have been excellent. It is purely and simply a local method of treatment. Deep, indurated acnes have been the ones we have treated largely. Three or four serious cases of acne rosacea have responded beautifully to X-Rays. In two cases we have seen atrophy of mild form, with fine wrinkling, follow the treatment.

In eczema occurring in chronic patches about the ano-genital and other regions, and also that form occurring on the hands of professional and tradespeople, the so-called "dermatitis manuum," the results given by radiotherapy have been exceedingly good. More than fifty cases of the latter have been entirely relieved of symptoms, and some have remained well for two and one-half years. The etiological factor in these cases has varied from strong applications, such as formalin, to ordinary water.

In seventeen cases of sycosis results have been good. In two cases, obstinate recurrences took place, three more had temporary recurrences, while the balance are well.

For more than two and one-half years we have had under observation and treatment a case of mycosis fungoides, which has exhibited about one hundred and fifty lesions. Over one hundred and twenty have been removed. The

patient's general health soon improved upon the institution of treatment and is now good. We know that mycosis fungoides at times makes temporary improvement without treatment, but in this case X-Rays seem to have been of great value.

In eleven cases of keloid, of both the true and circatricular types, our results have been practically the same as those mentioned by Dr. Pusey.

In lupus erythematosus, I must say that we are a little more enthusiastic in regard to good results with radiotherapy, but it is in the deep-seated, seborrhoic variety of the disease that our results have been most happy. By combining radio- with phototherapy we have had excellent results in thirty-three cases of this disease.

In two cases of angioma, X-Rays removed the tumors in a short period of treatment.

We agree entirely with what Dr. Pusey said with reference to hypertrichosis, it being less satisfactory to treat with X-Rays than the other conditions mentioned; but I will say that if one is given a year's time, with the opportunity of removing the recurring hairs, even for the fourth time, if necessary, hypertrichosis can be handled comparatively successfully.

There is one more case I should like to mention on account of the possibilities suggested by it. It was a case of lupus erythematosus of six years' duration, occupying both cheeks. In January and February, 1903, a period of radiotherapy was given, consisting of thirteen treatments; another, consisting of ten treatments, in May and June. In July, the mild reaction had subsided and the disease was quiescent and seemed nearly well. In September, which was three months after the last treatment, one side ulcerated, and in November the opposite side did likewise, which was five months after the last treatment. Each ulcer remained open two and one-half months. Such an occurrence we have never seen before in lupus erythematosus after other methods of treatment.

Dr. Pusey (closing the discussion): I think it unfortunate that a paper like mine, which undertakes to sketch almost the whole domain of X-Ray therapeutics, and one like Dr. Capps', which takes up only one field of the therapeutic use of this agent, should have been discussed together, because the extent of the subject which my paper suggests for discussion makes it impossible for so interesting a paper as he has read to receive the attention that it deserves. In the light of his remarks the case of splenomyelogenous leukemia which I have reported to-night seems to be one of great interest. First, from the rapidity in the improvement in the blood and in the diminution in the size of the spleen, and second, in the complete disappearance of the myelocytes. The blood count improved within four weeks, so that, except for the persistence of the myelocytes, it was normal and the spleen became almost impalpable within the same short time. The myelocytes were the last abnormal element to dis-

appear, but these continued to decrease for two months until, as shown by my counts as well as that of Dr. Evans, on Dec. 28th, they had entirely disappeared. The spleen also continued to diminish until it could not be felt under the border of the ribs.

In my first case of lymphatic leukemia, to which reference has been made by Dr. Capps, while the disappearance of the gland was quite as remarkable as in any of the later cases and while the patient's physical condition improved, the improvement of the blood did not progress *pari passu* with the improvement in the glands and his condition never reached one that could be called approximately normal.

In Churchill's case, to which reference has been made, I gave the X-Ray exposures, and I am perfectly sure that the patient did not have enough treatment to influence the course of the disease. The exposures were given only three or four times in the week preceding death. The case was an acute one, rapidly sinking at the time treatment was begun, and it is not to be expected from the small quantity of X-Rays which this patient received that any effect whatever upon the course of the disease could have been produced.

I know of nothing for me to add to the discussion upon the use of X-Rays in cutaneous diseases. I am gratified to find that all of our experiences agree so closely, and I believe that this is a point worthy of comment as indicating the established value of the agent and the attainment of a practical technique in its use. I am very much flattered that after my hour-long paper some of the gentlemen are so kind as to express their regret that I did not have something more to say about technique and idiosyncrasy, and other matters. I use about the same technique that I have used from the start, and have previously described. The essential fact in my technique is the use of a small quantity of X-Rays in each exposure and the gradual accumulation of the X-Ray effect by repeated exposures. In general, when I want to get a superficial effect, I use a soft tube, and when I want a deep effect I use a hard tube, but except for the choice of the hard tube for deep effects I do not think I attach as much importance to the quality of the tubes as is generally done. After all, the attainment of satisfactory results in the use of X-Ray is a question of experience, and the only safe policy for one to pursue until he is sure of himself, is to be very careful to keep his X-Rays within the bounds of safety. With reference to idiosyncrasy, there can be no doubt of the very marked difference in susceptibility to X-Rays of different individuals, and when one is treating large areas, as in acne or eczema, one has to be careful until he has established the tolerance of the individual. In treating lesions like epitheliomas, where you expose only a small area beyond the diseased surface, I throw considerations like idiosyncrasy out of the way and go ahead. If one does produce a severe dermatitis in such a lesion and in the healthy tissue for a quarter of an inch around it, what

harm is done? In pursuing such a course with these cases I have never had a result that gave me any worry.

CHICAGO SURGICAL SOCIETY.

A regular meeting was held, Dec. 5, 1904, the President, Dr. L. L. McArthur, in the chair.

Actinomycosis.

Dr. Arthur Dean Bevan, in a paper on this subject, referred, first, to the early history of this disease, saying that Von Langenbeck first noticed the sulphur-green-like bodies of actinomycosis as early as 1845; and that Bollinger recognized the ray fungus in lumpy jaw in cattle. Israel, in 1878, recognized the ray fungus as the cause of the disease in man. Belfield first recognized the ray fungus in lumpy jaw in cattle in this city, and Murphy reported the first case of actinomycosis in man in this country in 1883.

Clinically, the disease appears in four different forms, with four different groups of infection: (1) The head and neck actinomycosis, with infection from the mouth and pharynx; (2) actinomycosis of the chest through the respiratory tract; (3) abdominal actinomycosis, with infection probably always through the alimentary canal; possibly, however, in rare instances through the female genital organs; (4) actinomycosis of the skin.

The lymphatic glands are seldom involved, but he reported one case in his group of cases in which there was invasion of the lymphatics. Dr. Bevan reported cases illustrating each form of the disease, and showed numerous microscopic slides.

Dr. John B. Murphy said that an important feature brought out by the essayist was the demonstration of lymphatic involvement. In none of the cases that came under his observation was it shown that the lymphatic glands became involved, or that the infection was transmitted through the lymphatic chain and arrested in the lymphatic glands. Another point was the enormous infiltration that occurred around a small focus of suppuration. This is one of the first things that attracted Dr. Murphy's attention in the first case of actinomycosis he saw, in 1883. This was a typical case of actinomycosis of the jaw, in which the infiltration extended down to and involved the neck to the extent of an inch or more on each side. There was apparently a small fluctuating focus. When the involved area was opened, a number of yellow bodies escaped. These appeared molded. They were not round nor oval. The infiltration described by Dr. Bevan in his case of actinomycosis of the pelvis was one of the classical conditions of the disease in the peritoneum. While the disease affects bones, muscles and destroys the tissues with which it comes in contact, it elects fatty tissue, and passes by preference along the fatty tissue tracts, involving skin, muscle or bone, lifting its periosteum, attacking the periosteum, or

sometimes attacking the fatty tissue close to the periosteum without attacking bone.

As to treatment, Dr. Murphy's first, second and third cases recovered, but the fourth one terminated fatally, which was one of peritoneal actinomycosis, where the microorganisms escaped either through the stomach wall or transverse colon. There was no perforation of the stomach wall nor of the large intestine. There was infiltration of the fatty tissue on both sides, the microorganism having passed up into the diaphragm and beneath the surface of the liver.

Relative to actinomycosis of the appendix, he had seen two cases, one of his own and another he saw in consultation with Dr. Lee. In the first the actinomycosis process was confined practically within the appendix. The appendix was extirpated, followed by recovery. The case of Dr. Lee pursued a different course.

Dr. E. Wylls Andrews said one cannot help noticing the large percentage of recoveries which had been referred to, which is quite contrary to his own experience in the rather limited number of cases he has observed in the last few years. Most of the cases he has seen have either died or, if they were living, there is an increasing actinomycotic mass in other parts of the body. He recalls one man who has a mass in his chest, and who, he thinks, is going to die. These cases ought to be worked up with exceeding care. If one analyzes all the cases of actinomycosis of the alimentary canal, he would scarcely find one involving the stomach, and the probabilities are that the acidity of the stomach prevents the active generation of the germs there. A comparatively small number are found in the upper intestine. In nearly one-half of all cases reported the actinomycetes are found in the cecum and in the appendix. He has not seen a case of actinomycosis involving the rectal region.

Dr. M. L. Harris has seen during the past year three cases of actinomycosis, which apparently were hematogenous infections. The first case was in a country boy, who was admitted to the hospital with a slowly developing swelling in the prevesical space. It had the characteristic hardness. He opened the mass and obtained a small amount of pus. Inoculations from the pus gave a pure culture of *staphylococcus pyogenes albus*. In the first pus which was evacuated no granules were recognized, but on the dressings a few days after the characteristic granules were at once recognized. and when submitted to the microscope demonstrated to be actinomycosis. The case progressed, the exudate spread, sinuses and fistulae were formed about the abdominal wall into the lateral wall of the pelvis. The boy was operated on several times; these tracts thoroughly cleared out, and during the operations the abdominal cavity was opened, because the speaker was suspicious of a primary intestinal origin. The abscess did not originate in the appendix, nor could he find any point of the intestinal tract that was involved, so he

was unable to explain how the infection reached the prevesical space, except through the blood. The patient was subjected to all the recognized treatments for actinomycosis. Iodide of potash was given internally continually and interruptedly. He was given X-Ray treatment very thoroughly, but in spite of all treatment he progressed from bad to worse, and after a period of several months died. A peculiarity in this case was the very marked reduction of hemoglobin. The red cells were not reduced in number, but the hemoglobin was reduced to a low point before death. Dr. Harris detailed at considerable length the other two cases that have come under his observation, and said that the three of them seemed to be instances of hematogenous infection, the organisms having been carried in through the blood, as there was no local point of infection, so far as he could determine.

Dr. A. J. Ochsner said there are a great many cases of actinomycosis in Chicago and its vicinity, although most of them are not accurately diagnosed. He was almost never without a case of actinomycosis. He has one at the present time under treatment. He recalls half a dozen cases in which the face and neck were involved, one in which the larynx was affected, in a number the abdomen was involved, in one the eighth rib, and in others the appendix. He has had two or three cases of actinomycosis of the lungs.

As to treatment, he believes surgeons should follow the method of veterinary surgeons, if they wish to succeed in treating this disease. In late cases of actinomycosis in cattle the veterinary surgeon has the animal killed. He never tries to cure a late case of this disease in cattle. In the early cases, however, an effort is made to remove the entire mass by thorough curettage, followed by the administration of large doses of iodide of potash. Veterinary surgeons give a large quantity of iodide of potash for several days in succession and then they interrupt its use, giving the spores time to develop into ray fungi, after which they repeat the dose for a day or two, then withdraw it for a day or two again, repeat it again, and so on, and in cases where the actinomycotic process is localized the cattle recover. Actinomycosis in the human being should be treated on the same principles. About eight or nine years ago the speaker followed the method of giving iodide of potash in increasingly large doses, but in several cases in succession there was apparently no effect upon the disease until he reached the dose of a dram three times a day, and then the progress of the disease became arrested. He remembers the first case in which he was impressed with the importance of large doses of iodide of potash, and this was an instance in which he operated a dozen times. It was a case of actinomycosis of the scalp. The disease burrowed and burrowed, and every week or so he found it necessary to scrape the scalp and apply every remedy he could think of, without much improvement. However, when he reached 60

grains of iodide of potash three times a day the disease was arrested. The next case he had acted in a similar manner, and since then he has made it a rule to give 90 grains of iodide of potash in a half pint of hot milk at two in the morning, two in the afternoon, and ten at night, for as many days as the patient can stand it. If the patient can bear it for a week, then it is withdrawn for some days, after which it is repeated for three or four days, withdrawn again, and later repeated once a month. The reason why he repeats iodide of potash once a month is this, that in one of his fatal cases he did this for a time, and the patient was apparently well, but two years later the patient had a recurrence and died of the disease. A circumscribed encysted abscess was found at autopsy in the lower end of the right pleura.

Dr. L. L. McArthur reported the case of a young woman, very fond of golf, who frequently was rebuked by her husband for dragging at hay and chewing it while playing golf. She developed actinomycosis of the alveolar process, which required three or four months' treatment by a dentist before it healed. Nine or ten months later, while playing golf, in the South, she began to have pain in the right iliac region, and this pain being of a rather colicky character, on her return home she consulted her family physician, Dr. Carey, who, feeling a mass there, and noticing she had elevation of temperature, sent her to the speaker's service at St. Luke's Hospital, believing it to be a probable appendiceal abscess. Dr. McArthur concurred in this diagnosis and advised operative measures. On opening the abdomen, a tumor was found in the ileo-cecal region involving the appendix, ileum and cecum, for a distance of four or five inches on the cecum. The tumor in its clinical aspect, although having no miliary bodies in it, seemed to him to be a hypertrophic tuberculosis, and on that basis, with the consent of the family physician, he made a resection of the entire ileo-cecal region, implanting in the side of the hepatic flexure of the colon the resected ileum. On lifting up from the iliac fossa this mass, a few drops of pus were seen on the fascia covering the iliac muscles. This was mopped up, drainage provided for, and the wound closed. The wound healed after a few weeks, the patient left the hospital, and for three months was quite well, when she began to have a cough and high temperature, with chills and night sweats, and during his absence from the city she was seen by his assistant, Dr. Hollister, who considered the case, although he was unable to demonstrate tubercle bacilli in the sputum, one of acute tubercular trouble, the patient having lived in the house of a patient who had died a few months before of tuberculosis, and many of her living things still being in the house, such as bedding, clothing, etc. On Dr. McArthur's return, the patient being extremely ill, he saw her and found a tender area, with an enlargement in the neighborhood of Riedel's lobe of the liver, and consid-

ered the condition one of hepatic abscess with burrowing through the diaphragm. He urged operative interference. The husband refused to have any operation performed until she had become extremely run down and had a temperature varying from 103° to 106° for three or four weeks. Then, at his urgent solicitation, the patient was brought to the hospital, he made an incision over this area, and found an abscess which had perforated the posterior sheath of the rectus muscle, and in which were then to be seen for the first time the typical granules, and the nature of the case became clear. The patient lingered along for about two weeks, and finally died. A careful post-mortem examination was made by Dr. Hektoen, and a very thorough report of the case was made. In the sputum there were found the typical leptothrix-like threads, but never any suspicion was had of granules. In the stomach abscess opened there were typical granules to be found, and from them cultures were made which proved typically characteristic, so that here was a person in the habit of chewing grain and hay, who had disease of the jaw, who had a hypertrophic actinomycotic infection, which often is indistinguishable from tuberculosis, who recovered from that and later developed hepatic abscesses, with perforation of the diaphragm. Post-mortem examination showed multiple stomach abscesses burrowing into the diaphragm, and miliary abscesses along the bronchi.

The regular meeting of the Chicago Surgical Society was held January 16, 1905, with the President, Dr. L. L. McArthur, in the chair.

Stricture of the Esophagus.

Dr. Daniel N. Eisendrath presented a patient who began to have difficulty in swallowing, with regurgitation of food, about one year ago, necessitating eventually a gastrostomy. This operation was done in New York, with apparently a good result. An esophageal bougie could not be passed beyond the level of the junction of the manubrium with the gladiolus. He had the patient swallow a large amount of bismuth, and then made a radiograph, which showed the obstruction, and to the left of it a tumor. The obstruction was a saccular one. After the passage of steel sounds, the man was able to swallow milk, but at present was feeding himself through the gastrostomy wound. This case showed the value of the X-ray and bismuth for diagnosing these conditions.

Dr. A. E. Halstead stated that the tumor which showed in the radiograph of Dr. Eisendrath's case probably was a diverticulum, although it might be an aneurysm. Skiagraphing these diverticuli with bismuth was not so good as passing a soft rubber tube filled with shot, and then skiagraphing.

Dr. Eisendrath said he had failed to find any evidence of aneurysm or tumor in his case, after repeated examinations, and he was unable to differentiate at present between aneurysm, tumor, or diverticulum.

Actinomycosis of the Jaw.

Dr. William Hessert presented a young woman, aged 15, who a few months ago presented a history of toothache and a swelling of the right jaw. A decayed tooth was visible, and the trouble seemed to be a necrosis of the jaw, with cellulitis in the surrounding tissue. Operation failed to disclose pus. There was a hard indurated mass, the bone being denuded. The wound healed, but the tumor increased in size. Later small areas of softening appeared, three or four of which were incised and in the discharge was found the ray fungus. The patient was put on large doses of iodide of potassium, and had improved steadily. The mass had diminished in size about one-half, and she could now open her mouth better than ever before.

Metastatic Renal Abscesses.

This patient consulted Dr. Hessert because of a necrosis of the right jaw. Some years ago the patient had necrosis of the right femur necessitating its amputation two inches below the trochanter. Later he had some abscesses of the back. The trouble in the jaw was diagnosed as an osteomyelitis. An incision was made and a small amount of pus was evacuated. The patient did well for about ten days, when he began to complain in the right lumbar region. Repeated examinations of the urine finally showed a small amount of pus. The right kidney was increasing in size, and became tender. The general condition of the patient was indicative of sepsis, and a diagnosis of suppurating right kidney was made. The kidney was removed, and showed a number of abscesses in the cortical portion. The pus was found to contain staphylococcus pyogenes aureus. The patient did well for a while, but finally complained of pain in the left kidney, which became large and tender. The pus showed in the urine. An incision was made, and many abscesses were found in the cortex of the kidney. These were evacuated with the finger, the wound was packed, and the patient made a slow but uneventful recovery.

Dr. Eisendrath extirpated a kidney about five years ago for ascending pyelonephritis with multiple abscesses, and later doubted whether he did not make a mistake in doing so. Fortunately, the patient recovered without further symptoms.

Dr. A. H. Ferguson referred to a case he reported some years ago of multiple abscesses of the right kidney, where he excised some of the abscesses and opened others. The other kidney became involved two years later, but the patient refused operation, and died from sepsis. In the kidney operated on no abscesses developed subsequently, adding strength to the practice of not extirpating such kidneys.

Dr. W. M. Harsha mentioned two cases of actinomycosis he had observed in the past year, saying that the tissue around the broken-down masses was very hard, almost gristly. This condition was so marked that he considered it a valuable diagnostic sign.

Dr. D. A. K. Steele favored instituting con-

servative treatment in multiple embolic abscesses. Nephrectomy, however, should be the rule in tubercular cases.

Brain Tumor.

Dr. John E. Owens reported an interesting and instructive case of cerebral tumor removed in two stages by the osteoplastic method, with subsequent wiring of the bone flap, and the introduction of a gold plate. The primary result was excellent.

Dr. Eisendrath mentioned the difficulties met with in performing these operations, one of them being hemorrhage from the scalp. In a case of Jacksonian epilepsy operated upon by him, the hemorrhage was so severe the patient was almost exsanguinated. He had observed a number of cases in which it was almost impossible to keep the bone flap in apposition with the remaining portions of the skull.

Dr. Ferguson had operated on a number of such cases, but in none of them had he any such favorable results as Dr. Owens had in his case. He succeeded merely in securing temporary relief from the headache. The hernia cerebri became enormous. He depended entirely on a sufficient number of hemostats and pressure to control hemorrhage from the scalp in these cases.

Dr. A. E. Halsted had found that hemorrhage could be controlled with artery forceps and pressure. A few years ago he operated on a case of brain tumor at the base of the skull for the purpose of relieving pressure symptoms. He made a trephine opening and evacuated the ventricles. The intracranial pressure increased enormously, so much so that the brain tissue was forced out through the small opening, through which the fluid was withdrawn from the ventricles. By tapping the ventricles, the patient's condition was improved and the pressure was relieved.

Dr. D. A. K. Steele stated that while the ultimate outcome of Dr. Owens' case was still in doubt, the temporary relief and the prolongation of the patient's life were of value. Reference was made to an intracerebral sarcoma, about two inches in diameter, which he published about two years ago. The location of the tumor in the motor area was easy, and its removal was not difficult. While there was no difficulty in controlling the hemorrhage from the scalp, hemorrhage from the longitudinal sinus was severe. He packed in an abundance of iodoform gauze, and succeeded in controlling the hemorrhage. The patient was still alive after twelve years.

Dr. Owens, in closing, stated that hernia of the brain could be prevented by making the opening in the dura at the base of the flap when this was possible. This could not be done in his case because of the natural opening at the top made by the tumor.

Hydrocele in the Female.

Dr. A. E. Halstead and Dr. Chas. P. Clark reported jointly a case of hydrocele in the female.

Dr. L. L. McArthur presented a case with a history of calculi in the common duct and biliary passages. One hundred and forty stones were removed. The patient died on the third day after the operation from sepsis. On section of the liver, stones were found in all the biliary ducts. He showed a gross specimen of the liver. He also exhibited a skiagraph showing stones in the kidney.

Dr. Eisendrath exhibited a specimen which illustrated the mechanism of rotary dislocations of the atlas upon the axis. He also showed a boy, 16 years of age, with syphilis hereditaria tarda. There was a marked enlargement of the left tibia, gretaly resembling periosteal sarcoma. Investigation revealed the probability of syphilis in the parents.

He also exhibited an X-ray of the pelvis and both femora, in which the head of the left femur was entirely destroyed through the presence of a metastasis from a primary tumor of an undescended testis.

SOUTH WESTERN SECTION OF THE CHICAGO MEDICAL SOCIETY.

Regular meetings are held monthly at 540 W. 63d st. Membership 70.

Officers.

President.....F. L. Rose, 5420 S. Halsted st
Vice President.....Wier
Secretary-Treasurer..C. H. Lovewell, 5500 S. Halsted st.
Official Reporter, T. C. McGonagle..5504 S. Halsted

The Southwestern Section of the Chicago Medical Society held its fourth annual banquet and ladies' night at the new Masonic Temple, 6734 Wentworth avenue, Monday evening, January 9, 1905.

It is an old saying that practice makes perfect, and it is no exaggeration to say that this banquet was as nearly perfect, perhaps, as it is possible to have one.

There were present fifty couples, all except five being our own members.

The feeling of harmony amongst the physicians of the district (one of the prime objects of the Society in its beginning) is more and more apparent, and we feel, and have reason to feel, proud of our attainment in this direction.

There is heard on all sides, both by the ladies and many of the doctors, Why do we not have a banquet more often than once a year? and this shows how enjoyable these functions are. The success of this banquet is due to the untiring efforts of the banquet committee, Drs. Morton, Lovewell, Jr., and Weir.

The reception began promptly at 6 o'clock in the parlor (main floor), and at 7:30 the line of march was formed and proceeded to the large banquet hall on the third floor. The tables were decorated with pink carnations and rose buds. After the banquet the program was rendered.

President Rose, in a few well chosen words, introduced Dr. C. H. Lovewell, Sr., as toastmaster, who did the honors in a very able

manner. Dr. Champlain responded to the toast, "The Doctor in Englewood in the Early Days." The doctor, being one of the first to locate in Englewood when there were very few people here, was able to respond to such a toast in a very fitting manner. Dr. Campbell responded to the toast, **The Doctor's Hobbies**. Dr. Campbell had always succeeded in getting excused from our other programs, on the ground that he could not perform such a duty, but he very ably demonstrated that in the future he will have to plead some other excuse. Mrs. Dr. Shortell gave a reading, **Doctor McClure's Ride**. Dr. F. T. Avery responded to the toast, **The Ladies**. Mrs. Dr. Miller responded to the toast, **The Man**. Dr. M. D. McNab responded to the toast, **The Doctor Abroad**. He was very strikingly reminded on this occasion of the very great resemblance existing between the chairman of the banquet committee, Dr. Ed. Morton, and King Edward of England. Dr. Rose read one of his inimitable original poems.

Ol' Doc Lent of Frogmore.

They say that young Doc Morfoot is drivin' fit to bust;

An' Green, the homeopathy, is raisin' quite a dust.

They're both of 'em nice fellers, so fur as I can see.

But Ol' Doc Lent of Frogmore is good enough for me.

I never could get used to these doctors nowadays,

With all their queer inventions an' their new-fangled ways.

Doc says he doesn't need 'em; he's practiced forty years

Without no patent dingus a-stickin' in his ears!

When Doc Lent comes to see you, he just hauls up a chair,

An' feels your pulse a minute, an' sets a-startin' there;

His black eyes borin' thorough you; there ain't a single thing

A-goin' on inside you that he don't see, by jing!

Some folks that's kind o' dainty, don't cotton to him much,

Because he smokes a corncob, an' chews to beat the Dutch,

An' don't use no palaver, ner waste a lot o' breath.

When layin' out his program fer circumventin' death.

There was Darius Thompson, down on the Gordon swamp.

Malary an' chill-fever was meat an' drink to Tomp;

But when Pneumony got him, he caved right in, an' soon

Was ravin' like all Bedlam, an' whoopin' like a loon.

They sent for Green, who left him some little sugar pills,
That wouldn't fease a chipmunk; and' then they sent for Mills;
But Mills was drunk, as usual, an' got lost on the way,
So then they took on Morfoot, an' kept him half aday.

At last they had a glimmer of sense, at Gordon's swamp,
An' Ol' Doc Lent of Frogmore was gi'in a whack at Tomp.
Doc didn't putter 'round' none, ner hem, ner haw, ner doubt,
But put Tomp on Lobelia-an' let him sweat it out!

Now Tomp is well as ever, an' tickled half to death;

A-drawin' in malarly again with joyful breth—
A livin' advertisement! An' folks can rip an' tear

An' cuss Dos, if they want to, but he cured Tomp, fer fair.

Doc ain't so awful pious—he swears like all possessed—

But there's a heart a-beatin' beneath his rusty vest.

An' I'll bet my suspenders that when his journey ends,

Saint Peter'll say, "Hello, Doc! Come in an' meet your friends!"

This was the only number on the program that had to respond to an encore, which the doctor did by the poem (original), "Mrs Horton's Fits." But for the fact that the Dr. had to get home to the baby, he would have been obliged to give another one, but we already have him on for next year.

At our February meeting we will have a paper by Dr. Kanavel, on "Teno Synovitis of the Hand."

EVANSTON BRANCH.

Regular meetings are held in Evanston each month.

Officers.

President P. D. Harding
Secretary G. W. Boot
Councilor S. V. Balderston

Abnormal Labor.

Henry Bixby Hemenway, M. D.: I am to make a few remarks this evening upon some of my recent cases of abnormality in confinement. One is sometimes tempted to pass over the study of the rarer forms of abnormality, simply because they are rare, but that is hardly a wise procedure, for the first case to which the new doctor may be called is liable to be one of the most difficult. In my own experience this was nearly so. Among the first score of accouchements in which I was called to officiate there were one each of placenta praevia, impacted transverse presentation, and retained placenta

from which the cord had been torn before I had been called.

I have often remarked that the conduct of a case of labor is very much like the running of a canoe through the rapids. So long as the craft is making safe progress, beware of interference. A single stroke of the paddle may so much accelerate its speed as to make it difficult to govern, or it may deflect it from a safe passage into one of the rocks that threaten destruction. The wise boatman sits still and watches. He must have a cool head, and be ready to act surely and instantly when there is necessity therefor. He must not permit himself to be spurred to action when action is not necessary. There are three sisters who have resided in this city, whom for convenience I shall call A, B, and C. Some years ago I attended A in confinement. I was urged to "do something," and I waited. When the case was ended I told the husband that with instruments I might have shortened the time considerably, but I thought it were safer to do as I had. I have recently attended B and C. After the last case A referred to my remarks at her confinement, and said that for several years she held that action against me, and that therefore the family had used other physicians. The doctors that had attended B and C with their first children had done the opposite from what I had, and in each case the results were such as I had striven to avoid. In their later confinements, when I attended them, B and C had done finely, as had A. On the other hand the delay of a single minute may sometimes cause the death of the patient, or at least serious harm.

The strain sometimes put upon the fingers, and the muscles of the forearm in the use of the forceps is enormous, and if long continued quite exhausting. In one of my recent cases I found it so, although my muscles are not weak. A roller towel gave me an inspiration. I fastened it to the forceps, in front of the handle, and put the other loop over my shoulders. Traction was thus made by my body muscles, leaving my arms and hands free to guide and regulate the progress of the head. This simple aid may have been used before, but if so I am ignorant of the fact. By its use the operator works to better advantage, and saves strength. In simple cases of forceps delivery I do not think that it would be of special value, but in severe cases it is of great advantage.

This year I have had two cases of atelectasis which have resulted favorably. Atelectasis is frequently met in obstetric practice, but it generally yields so readily to treatment that it is not noted. Of these cases mentioned above, the first was in a child well formed, and apparently normal in every other regard. She was not large, but her parents were small. Respiration was easily established, though the lung was not perfectly distended. It has been my experience in such cases that the lung gradually takes care of itself, without special treatment. In this case, therefore, I did not at first realize the connection between the condition of the lung and other symptoms as they developed. I

may incidentally remark that the apartment was imperfectly heated and the parents used an oil stove to help out. Of course this vitiated the atmosphere. There was practically no direct sunlight in the rooms. The child was born Feb. 8th, and a few days after that my attention was called to the discharges from the bowels. They were slightly green and contained mucus, and occasionally a slight streak of blood. In spite of alkaline treatment the green color developed to a blue green, such as I have never before seen in bowel movements. Mercurials, and salol for intestinal antiseptis, had little effect. There were sometimes small curds, but no large curds in the feces. I have often seen a condition of the digestive system apparently much more serious yield to simple treatment, but in this case the child gradually failed in nutrition. Sometimes she seemed to improve for a time. She moaned, or cried with a peculiar sound. Her abdomen was distended with gas much of the time, though not to a marked degree. In April she suddenly became much worse. A consultation was held, and at that time I called attention to the atelectasis, but I did not realize its importance. It was agreed by the three physicians that an enema should be given. She sank rapidly after the enema, and very soon had a convulsion. She died early the next morning, April 5th. I am now convinced that the malnutrition was largely, if not solely, dependent upon deficient oxygenation, and this was chiefly the result of a lack of useful lung tissue. The impoverishment of the air by the oil stove, and the imperfect heating of the room undoubtedly aided in this result. I might add that the baby had a slight throat cough, and frequently was troubled with mucus in the mouth, sometimes streaked with a little blood. Expectorants had practically no beneficial action. The enema was objectionable because by pressure it still more decreased lung action, and its result was immediate.

Many of our text books are silent upon Atelectasis. In Cazeaux, Lishman and Tarnier I do not find it mentioned. In fact, those authors seem to regard the life of the child of little consequence, if we may judge from the space devoted to the baby. Other authorities generally give very little space to atelectasis, but they agree that the cause of the condition is prematurity, obstruction to the circulation through the cord, inspiration of mucus or liquids, or general malnutrition, or bronchitis. None of these conditions were present at first in the case related. It is undoubtedly true that the malnutrition and consequent weakening of the system intensified the trouble, as did also the slight bronchitis, but originally they were the result, not the cause of the atelectasis.

I recently had another case of atelectasis in the first child of a German family. In this case the delivery was instrumental on account of the lack of efficiency in the mother's pains. There was no undue pressure upon the cord. The child was apparently perfectly formed, well nourished, and weighing about eight pounds.

The heart was beating strongly and continued to beat for fifteen minutes after birth at least. In this case there was not the slightest effort towards inspiration. The mouth was clear, but I wiped the throat as well as I could. I used hot and cold water, spanking, slapping the chest and pulling the tongue, aside from the usual methods of artificial respiration. I even tried, with my mouth over the child's mouth and nose, to inflate his lungs, but not a particle of air entered his lungs so far as I could determine. I inflated the stomach without trouble or obstruction. I am sorry that I could not have a post-mortem examination, but I was sure that it was a genuine case of atelectasis, due to the agglutination of the pulmonary cells.

Within the past six months I have had two cases of Placenta Praevia. The first I saw through the courtesy of Dr. Kaufman. In that case the child died before I began to operate, I believe. I dilated the cervix with my fingers; forced my hand through the edge of the placenta, performed version and rapid extraction. The mother made an uneventful recovery.

August 6th I attended Mrs. B. From time to time after the first month she had occasional discharges of blood from the womb, but in each case the flow was checked by a few doses of ergot with *viburnum prunifolium*. July 28th I was called again, and supposed that labor would then take place. The os was slightly dilated, and the placenta could be easily felt apparently more firmly attached posteriorly than anteriorly. The ergot mixture immediately stopped the flow, and with the advice of Dr. Harding, who was called in consultation. I waited for developments. Early Aug. 5th I was called again, and immediately sent for Dr. Harding. Upon examination I found the posterior portion of the placenta easily detachable, and vertex presenting. As before, I dilated with my hand and pushed the placenta forward. My hand served to dam the flow, assisted by the pressure of the child's head. I did not withdraw my hand for an instant from the first examination, until the head was upon the perineum, but kept it against the head, withdrawing it as the head advanced. I delivered the placenta immediately after the child, and mother and boy are well and strong. This is Mrs. B.'s third child, and the other woman has had four previous children. In the case of Dr. K.'s patient, full anaesthesia was produced by chloroform. In the second case I did not resort to anaesthesia. For dilation of the cervix, and for damping the flow, I prefer my hand. I may here remark that I have not yet been so unfortunate as to lose a mother in this trouble, and I have been fortunate enough to save a majority of the children in my cases of placenta praevia. In the case of Mrs. B., if she had resided some distance from a number of physicians, or if treatment had failed to check the hemorrhage, I should have early emptied the uterus. As it was, I explained the condition to the husband and wife, and instructed them to call a physician at once upon sign of trouble,

and if they could not get the one sent for at once, to get another.

I here show you a child recently born in my practice, to healthy German parents. Ten children had been born previously in the family without defect. The father is 41, and the mother 39 years of age. A bright little girl was born May 4, 1903. Last monthly period was in December. Confinement occurred October 9, 1904. When I reached the house I was informed that the waters had broken some time before. Upon examination I told them that they must have been mistaken, as there was a good bag of water then dilating the cervix. The mother said that she did not see how she could have made a mistake, as considerable water had escaped. The amount of water was so great that I had considerable difficulty in diagnosing the presentation. I noticed that examination produced violent convulsive movements in the child, especially when I touched what I at first thought was the sole of a foot. Sometimes I touched what seemed like the crest of a tibia, but following it up I failed to detect the knee or the ankle. At first I thought that this inability might be due to the movements of the foetus. Being unable to make a positive diagnosis, I ruptured the membranes. The result was as if I had opened a fire plug. It was quite impossible for me to estimate the amount of liquor that escaped. At that time the os uteri was dilated about three inches, and the diagnosis was not difficult. The extraction was not so easy. The small head gave an imperfect hold, and the shoulders were held by the imperfectly dilated os. I extracted by placing my left index finger at the occiput, and the other fingers of the left hand under the chin. Before the foetus had emerged from the womb I informed the parents that the child would not live. The child is a boy, perfectly formed except as to the head. When first born I saw the medulla abruptly truncated, but I did not see any cerebrum or cerebellum. As may be readily seen, there is practically no bony formation of the skull above the floor of the calvarium. The top of the head was open. Evidently the reflex convulsive movements noticed had been the result of touching the exposed medulla oblongata. The child at once began to breathe, and occasionally gave a deep sigh. It lived an hour and a half, or two hours.

This is not strictly acephalus, for there is a portion of a head. The term *Anencephalus* has been used, but the word is generally applied to those cases in which there is also absence of the spinal cord. The term *Acrania* seems to apply more perfectly. The cause of this condition is not known. It is frequently referred to maternal impressions. In this case of mine, as soon as the parents were informed of the condition, each independently ascribed it to a fright received about the third month. The mother passed a calf in the cow-barn, and the mother cow took offense and charged upon Mrs. M. with horns down. Mrs. M. expected to be killed, but luckily fell out of the door. There were no bands that could have caused amputation, as I have seen in extremities. There was no his-

tory of specific infection. I have found the discussion of this condition in our text-books meager and unsatisfactory. Reports of specimens have generally stopped with the description of the specimen. Cazeaux and Tarnier, for example, say: "The acephalous and anencephalous foetuses are delivered as easily as those having a normal conformation," and dismiss the case. I do not think that this is true. A normal head or a breech form a wedge to make room for the shoulders and furnish a firm hold. In this case the small head interfered with my reaching the mouth of the womb, and did not sufficiently open the womb for the shoulders. The head would not give a good hold for forceps. Had I made the diagnosis before rupturing the membranes, I should have left them intact, and thus favored a more perfect dilation of the cervix, and consequent passage of the child. In a note in Cazeaux and Tarnier's *Obstetrics*, Prof. Munde gives the only practical suggestion on diagnosis that I have seen. He says: "Whenever the finger touches the presenting part, the foetus is affected with convulsive and irregular movements which soon attract attention; the motions being probably due to direct irritation of the stump which is generally surmounted by the hairy scalp in cases of this kind." I should say that this symptom found with hydramnios, and an absence of such land-marks as foot, hand, ribs, long bones or vertex, is pretty sure indication of *acrania*.

In the *Medical Mirror*, Dec. 1891, Booth reports a case of *anencephalus* born with a two and a half months' foetus, enclosed in a sac containing about a gallon of sero-sanguinolent fluid. The death of the small foetus was ascribed to a fall which the mother had when between two and three months pregnant. In my case the mother fell at about the third month. She may have also received a blow upon the abdomen at the same time. It has been noticed that the condition of *acrania* is generally associated with hydramnios. Knox, in 1889, in the *Glasgow Medical Journal*, argued that *acrania* was not an arrest of development, but was due to inflammatory action. Hydramnios and hydrocephalus have also been ascribed to the result of inflammation.

After reflection, I am led to the conclusion that in this, and probably other cases, the fall occurring when the newly formed head overbalanced the body, floating freely in the liquor amnii, caused injury to the head, and consequent inflammation. The result of this inflammation was probably more hydrocephalus than hydramnios. The mother was probably correct when she informed me that the waters had broken. I probably mistook the highly attenuated scalp for the normal amnion, and when I ruptured it the escaping fluid was primarily that from the interior of the cranium, later mixed with the amniotic fluid released by the collapse of the hydrocephalus.

Scientifically speaking, the monster here shown is below the animals, for it has no brain. It would be unable to care for itself, or

even nurse. In the case reported by Grawitz in the *Deutsche Medizinische Zeitung*, of Berlin, the child lived twelve days, being fed with a spoon.

Sociologically it will be generally agreed that such a monster should not be permitted to live. It would be an obstacle to the progress of the community, and if there is any truth in maternal impressions having a causative influence in these conditions, their preservation in life would tend to the multiplication of the defect. Society therefore demands that such monstrosities be put out of the way. But the question arises, "Where shall we draw the line?"

It matters not what our individual ideas may be on religious subjects, we should have regard to the principles of our patrons. It has been well said that it is worry that kills. Speaking, therefore, from a purely selfish and professional standpoint, we must heed the faith of our patrons. Since at such time the family are likely to be so excited as to be incapable of clear judgment, we should be mindful for them, that later they may not be needlessly troubled. We find all varieties of faith from that of the materialist to that of the member of the Roman Catholic church. The teaching of the Roman, and to some extent that of the Anglican church, is that as soon as conception takes place life exists, and the individual must be treated as an individual. Any course of action resulting in the death of the foetus at any period is murder. Further, the Roman church believes that baptism of the child is necessary for its salvation. If, therefore, the obstetrician is lead to believe that the life of the child of Catholic parents is in danger, he should secure its baptism. If necessary, he should perform it himself, even if in the womb. Baptism by an unbeliever, if performed with that intention, and "In the name of the Father, and of the Son, and of the Holy Ghost," is recognized as valid. If we are willing to shoulder the responsibility of the death of a monster, let us at least see that it is baptized, if the parents are Catholics. It is the wish of the church that even the foetus in a miscarriage be baptized, if possible.

Pneumonia Complicating Pregnancy.

Darwin R. Stockley, M. D.: Pregnancy is a condition, not a disease, and is wisely limited to the female sex, with whom it is an elective franchise. Epidemics of pregnancy still occur, but with decreasing frequency in countries beyond the borders of France and the United States, while in the latter sporadic cases are still encountered and are dealt with under beneficent laws which protect lying-in hospitals from lying, the daily press from perjury and certain of the prematurely born from the meddlesome observations of medical men.

As a prophylactic measure against complications, an embryo embryologist has suggested that incubation now practised as an inducement for the prematurely born to live, be extended to the ante-natal state. This irrelevant and irreverent measure, if adopted, while

adding to the onerous duties of the embryologist, would, on the other hand, open new fields of activity for the obstetrician and gynecologist.

Pneumonia is unfortunately a self-limiting as well as a selflimited disease. It is the sacred terror of our generation. It claims and secures first place in our list of unmanageables and in our mortality records, and easily merits the distinction "Captain of the Men of Death."

When pneumonia complicates pregnancy some pretty safe and vigorous conclusions may be indulged by the physician in charge and some strenuous efforts in treatment may be expected. All of the dangers attendant upon the state of pregnancy are increased and all of the evils that serve pneumonia are multiplied.

On May 20th, of this year, Mrs. R. L., 24 years old, of previous good health, was seized with a severe chill, followed by a fever which in twelve hours reached 105°. She was in the seventh month of pregnancy with her second child.

She was taken to St. Francis' hospital, where I treated her until June 10th, when convalescence was fully established and she was returned to her home.

On the third day following the chill, dyspnoea, a cough, and a right-sided pleurisy developed, and the right middle and lower lobes were found involved. Crisis occurred on the eleventh day, and ended a period of profound anxiety. At no time was cyanosis marked. The sputum throughout the attack and during the period of resolution was characteristic, but excessive in amount. The urine showed constant traces of albumen.

The diet of the patient consisted principally of buttermilk, of which she was fond, and of which, fortunately, the hospital was able to furnish a home-made supply.

A cream of tartar lemonade, to which was added an effervescing saline, discouraged an attendant constipation.

From the beginning of the attack oxygen was administered over long periods and at short intervals, with seeming happy results.

Two days before crisis the heart's action declared in favor of a stimulant, and strychnia nitrate gr. 1-30, was given every 4 hours, and continued 3 times daily during a week of convalescence.

The time-honored jacket was applied, and sponge baths, and an ice cap were used.

The palms of the hands presented a livid, purplish-pink color, which gradually faded during convalescence. During the entire extent of the disease the mother felt no movements of the child, although prior to the attack the process had been prominent, and subsequently hostilities were resumed with increased vigor.

On Aug. 10th, after a normal labor, a healthy ten-pound baby boy was born. No complications occurred during the lying-in period, and I observed no placental changes.

As to the cause of this attack, laymen and women, who, as sympathetic neighbors, ren-

dered efficient service at the first of the disease, advanced many theories. Among these may be named the fact of the persistent attack of the feet of the unborn child upon the patient's right side, often causing pain. Again, bad air from upturned earth in laying a gas main upon the premises received attention. Even more pronounced were the views of those who ascribed the attack to the draft from a window directly across the patient's bed, said window having been opened three days before to rid the room from the smell of turpentine from redecoration.

Hirst reports 5 cases, all aborted and 3 died.

Grisolle had a mortality of 92%.

Rican reports 43 cases, 21 aborted and 12 died.

Bourgens reported a mortality of 7%.

Wernick's mortality record was 21%.

Peck collected the reports of 19 physicians, including 156 cases, with mortality of 14%.

Matton says that of 18 cases in which pregnancy was artificially interrupted, on a theory that this proceeding would assist in treatment, 9 women died, while in 20 women who suffered from pneumonia without premature delivery, but one succumbed.

Many factors enter into the cause of abortion, among the chief of which may be named hyperpyrexia, hydraemia, imperfect aeration of

blood, general reaction and paroxysms of cough.

The immediate cause of death is reported as pulmonary oedema.

Sixty-five per cent of the mothers abort, and the mortality record is not far from this figure.

Cases are reported in which death has occurred without premature delivery.

From a study of the literature of pneumonia complicating pregnancy, we conclude that:

1. It is fortunately of rare occurrence.
2. The dangers of the pregnant condition are greatly augmented.
3. Abortion frequently occurs, increasing the mortality record and becoming more fatal as pregnancy advances.
4. The induction of premature labor is not to be considered.
5. Sluggish bowels, kidneys and skin are detrimental to crippled lungs, and therefore prompt and effective eliminative measures are indicated.
6. Early and continued use of oxygen, well recognized measures in hydrotherapy, proper stimulation at the proper time, and termination of labor at the earliest possible moment in inevitable abortion are commendable therapeutic measures.

County and District Societies.

WILL COUNTY MEDICAL SOCIETY.

Regular meetings held at Joliet, on the first Tuesday of each month.

Officers.

President.....Jno. B. Benson, Joliet
Vice-President.....Wm. Dougall, Joliet
Secretary and Treasurer, Frank C. Fisher, Joliet
Board of Censors: Wm. H. Curtis, Alfred Nash, Wm. Richards.

The annual meeting of the Will County Medical Society was held at the Hotel Munroe, Tuesday, Jan. 17, 1905. The meeting was called to order by President H. A. Patterson, at 7:30 p. m.

After reading and approving the minutes of last meeting, the Society proceeded to the election of officers for the ensuing year, with result as above shown.

The applications of Dr. F. W. Rulien and Dr. W. M. Struzynski, of Joliet, for membership in this Society, were presented by Dr. Cohenour, and that of Dr. E. A. Kingston, of Lockport, was presented by Dr. Nash. The applications were referred to the Censors, and upon their favorable report, on motion, it was decided to suspend the rules and ballot on the applications at once, resulting in their unanimous election to membership.

This being the occasion of the annual ban-

quet, and no further business appearing, on motion, the meeting was adjourned and the members, with their ladies and invited guests, repaired to the banquet hall. At the close of the banquet, the following toasts were responded to, with Dr. H. A. Patterson acting as toast master:

"The Doctor's Faith," Dr. Marion K. Bowles;
"The Public Health," Dr. Martin Cushing;
"Youth in Medicine," Dr. Alfred Nash;
"The Doctor's Wife or Husband," Dr. W. H. Curtis;
"Experience versus Science," Dr. Wm. Dougall;
"The Law and the Doctor," Jas. L. O'Donnell;
"The Political Doctor," Dr. D. W. Jump;
"The Doctor's Religion," Rev. S. W. Thornton.

Some twenty members of the Society, with their ladies, were in attendance at the banquet, and it was one of the most successful as well as one of the most enjoyable affairs ever given in the history of the Society.

CRAWFORD COUNTY MEDICAL SOCIETY.

Regular meetings are held bi-monthly on the second Thursday. Membership 24.

Officers.

PresidentDr. Frank Dunham, Robinson
SecretaryDr. H. N. Rafferty, Robinson
TreasurerDr. C. Barlow, Robinson

The Crawford County Medical Society met in regular session at the office of Dr. Firebaugh,

in Robinson, on Thursday, Jan. 12, 1905, at 2 p. m.

The following members were present, viz: Barlow, A. G. Meserve, Price, Cato, Firebaugh, T. N. Rafferty, Dunham, Voorheis and H. N. Rafferty.

The minutes of the November meeting were read and approved.

Dr. J. B. Cato read a paper on **Uterine Fibroids**. This was a very able resume of the modern views on this subject, being chiefly devoted to the differential diagnosis.

The discussion of Dr. Cato's paper was opened by Dr. T. M. Rafferty, who pointed out the fact that surgical treatment should be instituted early, as an apparently benign fibroma might assume malignancy, if neglected.

The paper was further discussed by Drs. Meserve and Firebaugh. It was moved and seconded that the Society endorse Dr. Egan to Governor Deneen for reappointment as Secretary of the State Board of Health. Motion was carried unanimously.

LOGAN COUNTY MEDICAL SOCIETY.

Officers.

President, J. L. Lowrie.....Lincoln
First Vice-President, L. F. Curtis.....Elkhart
Second Vice-President, Maskel Lee.....Atlanta
Secretary, H. L. Oyler.....Lincoln
Treasurer, W. H. Kirby.....Chestnut
Membership 20.

The Logan County Medical Society held its regular stated meeting in the City Council chambers, Dec. 22, 1904, President J. L. Lowrie in the chair.

P. B. Bradburn, of Lincoln, was taken into full membership.

Report of C. C. Montgomery, chairman of Special committee against contract practice, was accepted.

Report of H. S. Oyler, chairman of special committee on city organization, reported the organization of the Physicians' Club was accepted.

President Lowrie appointed J. R. Barnett committee to confer with the Logan County District Society for the purpose of holding a joint session of the two Societies.

Maskel Lee, of Atlanta, presented the Society with a very interesting and able paper on **Capillary Bronchitis**. The paper was fully discussed and a vote of thanks was extended to the doctor for his very excellent paper.

H. L. Cosby, of Lincoln, then presented the Society with a very able and timely paper on **Christian Science and the Irregular Practitioner**. The paper excited lively discussion, after which a special committee was appointed by President J. L. Lowrie to cooperate with the Brainerd District Medical Society and the Illinois Medical Society in an effort to eradicate the evil of "isms" and "polhs." The committee appointed consisted of H. L. Cosby, H. S. Oyler and C. C. Montgomery.

The Society then adjourned to meet on the third Thursday of February, 1905.

BUREAU COUNTY MEDICAL SOCIETY.

Officers.

President.....C. H. Kemp, Tiskilwa
1st Vice-President.....J. C. White, Seatonville
2d Vice President.....F. O. Pershing, Tiskilwa
Secretary and Treasurer...O. J. Flint, Princeton
Committees: Program, C. A. Palmer, M. H. Blackburn, Princeton; Publication, Hattie M. Owens, O. J. Flint, H. D. Steele, Princeton; Arrangements, A. E. Owens, C. C. Scott, Wm. Keller, Princeton; Necrology, J. J. Hanmore, Malden, B. F. Landis, Tiskilwa, F. C. Robinson, Wyanet; Board of Censors, J. C. White, Seatonville, J. R. Marshall, Sheffield, G. B. Bushee, Buda.

The twenty-second semi-annual meeting of the Bureau County Medical Society was held at the City Hall, in Princeton, Thursday, November 10, 1904.

The following members were present: W. C. Griswold, H. M. Owens, J. J. Hanmore, J. H. Franklin, C. C. Barrett, M. J. Coveny, C. A. Palmer, J. F. Taylor, W. L. Linabery, C. H. Kemp, M. H. Blackburn, A. E. Owens, William Kaul, J. W. White, B. F. Landis, William Keller, F. O. Pershing, C. C. Scott, William Bebb, J. H. McLean, J. P. Garwood, Grant B. Bushee, T. J. Otis, O. J. Flint.

The following visitors were present: T. J. Watkins and F. H. Montgomery, of Chicago, Ill.; Charles Cook and E. P. Cook, of Mendota, Ill.; F. A. Guthrie, of La Salle, Ill.; J. W. Pettit, of Ottawa, Ill.

The Secretary's report was then read and approved.

The Treasurer's report was as follows, to-wit:

Balance on hand May 12, 1904.....	\$ 7.18
Cash received for dues.....	60.00

Total	\$67.18
Expenses during the year.....	6.15

Balance on hand	\$61.03
Amount due State Society for 43 members at \$1.50 each.....	\$64.50
Amount of unpaid dues to County Society	44.50
Bills unpaid, about	17.00

The name of Dr. F. S. Tabor, of Spring Valley, Ill., was referred to the committee for consideration, on which a favorable report was made, and he was duly elected a member of the Society.

A very interesting paper was read by Dr. F. A. Guthrie, of La Salle, Ill., on **Apendicitis**. The papers of Dr. T. J. Watkins, of Chicago, on **Dysmenorrhea**, Dr. J. J. Hanmore, of Malden, Ill., on **Tetany**, Dr. G. B. Bushee, of Buda, Ill., on **Catarrh**, and Dr. F. H. Montgomery, of Chicago, on **Infantile Eczema**, were all very interesting, and brought out much valuable discussion.

The visiting physicians were entertained at the American House at dinner, and in the evening Dr. J. W. Pettit, of Ottawa, gave a very in-

teresting talk on his unique work in the tubercular camp at Ottawa, and on tuberculosis in general.

Dysmenorrhoea.

Dr. T. J. Watkins, of Chicago, said menstruation is normally attended by some pelvic distress, and that it was not easy to distinguish between this condition and slight dysmenorrhoea. The menstrual impulse occurs in the ovary and the menstrual escapes from the endometrium. The Fallopian tubes have been observed to take part in menstruation. The blood from the tubes does not escape into the uterus but into the peritoneal cavity. I observed in a patient recently operated upon during menstruation, bleeding from the right Fallopian tube, but no loss of blood from the other tube.

The following pathologic conditions of the pelvic organs are frequently attended by dysmenorrhoea:

1. Incomplete development of the uterus; common. Here the dysmenorrhoea usually dates from puberty. The pain may, or may not, become more and more aggravated. It frequently becomes less after marriage, probably as a result of development of the uterus. Pregnancy generally accomplishes a cure.

2. Endometritis: Dysmenorrhoea is a common but not an invariable symptom of endometritis. Dysmenorrhoea is often observed in cases of endometritis when the cervical canal is small, but it may be present when the cervical canal is large, as is found in some cases of deep cervical lacerations. The pain may result from the formation of sensitive granulation tissue, especially about the internal os from coagulation of the blood, from an increased transudation of blood between the mucosa and muscularis of the uterus, or from denudation of parts or of nearly all of the endometrium (membranous dysmenorrhoea.)

I am not aware that attention has been given to the formation of the sensitive granulation tissue about the internal os; I believe that this condition is common in cases of dysmenorrhoea, due to endometritis, and is especially important in determining the indications for treatment. The passage of an intra-uterine sound in these cases elicits extreme sensitiveness at the internal os. The condition probably results from retained decomposed secretions. The pathologic condition might be compared somewhat to the changes that take place back of strictures in the male urethra. This would explain how and why endometritis with constriction of the cervix causes dysmenorrhoea more frequently than endometritis without constriction of the cervix.

3. Uterine Displacements: Some years ago uterine displacements were given as a very frequent cause of dysmenorrhoea. There is no doubt that in many of the cases an endometritis escaped observation, or received too little consideration, and that the dysmenorrhoea was attributed to the displacements when it was caused by an infection. One should remember

that endometritis is very frequently associated with and often causes uterine displacements.

It is difficult or impossible to state the relation of retropositions of the uterus to dysmenorrhoea, as many of the cases of retro position of the uterus have dysmenorrhoea, and many of them are free from menstrual pains. It is true that most of them with pains have endometritis, and the cases without dysmenorrhoea are generally free from infection. It is probably possible for the retroflexion to be so acute as to cause an obstruction to the menstrual flow, and the pains of the retroposition may be aggravated by the pelvic congestion consequent upon menstruation. Ante-positions of the uterus which are physiologic do not cause dysmenorrhoea, and I believe with the authors who say that there are no pathologic ante-versions or ante-flexions of the uterus.

Under normal conditions the development and rupture of the Graffian follicles and the formation and absorption of the corpus luteum is unattended by pain. It is safe to state that the pain is never severe, as severe menstrual pain never lasts very long, while these processes in the ovary extend over considerable time. It is possible that patients that give a history of relief from pelvic pain for only about one week each month are subject of so-called "ovarian dysmenorrhoea."

There seems to be very little relation between tubal disease and dysmenorrhoea. Dysmenorrhoea is an infrequent symptom of non-inflammatory pelvic disease. Neurasthenia, hysteria and allied diseases have received too little consideration as a cause of dysmenorrhoea. The most severe menstrual pains are caused by the endometritis that produces membranous dysmenorrhoea. When the blood coagulates the pain lasts as long as much bleeding continues. With an undeveloped uterus the pain, as a rule, occurs only at the commencement of the flow.

The treatment of dysmenorrhoea consists in the treatment of the pathologic condition that produces this symptom, and is divided into prophylactic, palliative and curative. The first of these is chiefly adapted to "incomplete development of the uterus." Great care should be given to the diet, hygiene and out-door life and exercise of the girl during puberty. During that time, if the girl for one year should remain out of school, or out of employment, and devote the year chiefly to out-door life and recreation, the number of cases of dysmenorrhoea would diminish fifty or more per cent. The prophylaxis of dysmenorrhoea, due to endometritis, is the preventative treatment of endometritis. Much can be accomplished in this respect by a careful and thorough treatment of vulvitis and vaginitis.

The second of these treatments, palliative, should be employed in unmarried women, when the amount of pain is not sufficient to indicate pelvic examination. It may consist in the use of remedies to relieve pelvic congestion, or in the use of general sedatives. Cold extremities during menstruation indicates circulatory disturbance. It is relieved in many cases by the continued use of remedies to improve the gen-

eral circulation, such as outdoor exercise, attention to diet, elimination, hygiene, ferruginous tonics and the like. These disturbances may be relieved temporarily by the use of heat, especially to the extremities, cardiac stimulants, such as preparations of ammonia, camphor and alcoholics. One should always be mindful of the dangers attending the use of alcoholics in these cases. As a general sedative I have used for a number of years the following, in the treatment of dysmenorrhoea:

R.

Antipyrin Gr. v
Sodii Bromidi Gr. x
Spts Frumenti 13

M. S. Take in water every hour for 3 or 4 times when needed for the relief of pain.

It seems to me that opiates should not, as a rule, be prescribed for the relief of dysmenorrhoea, on account of the dangers which attend their use.

Operative Treatment. It should be remembered that pregnancy cures more patients of dysmenorrhoea than all the other remedies combined. Also that dysmenorrhoea is always a symptom of a pathologic condition, and that the treatment should be directed to the relief of that condition.

Dilatation of the cervix has been extensively and often successfully used in the treatment of dysmenorrhoea. It seems to me that dilatation of the cervix, as is often done in "office treatments," should be condemned, as they are not extensive enough to be of any permanent value, as they are painful and as they subject the patient to great danger of infection. Rapid instrumental dilatation under anaesthesia is often employed and the results often unsatisfactory, as results must be temporary; it often also produces lacerations or fissures at the internal os, and these result in the formation of scars, which increase the sensitiveness and tend to diminish the lumen of the cervix.

The use of tent dilatation of the cervix is a very important remedy, as well as the most valuable remedy, for dysmenorrhoea. By this means dilatation can be made permanent; their use stimulates development of the uterus; they establish good drainage; and they produce no lesions. Objections have been made to their use because of the dangers of infection. These objections are chiefly based upon the results obtained from their use before aseptic surgery was practiced. The tents can be perfectly sterilized and the dangers of infection consist in the use of faulty technique.

Technique. The tents (preferably laminaria) are sterilized, dry heat, and are then kept in absolute alcohol. Hands and instruments should be as thoroughly sterilized as for curettage of the uterus. A small tent is inserted and kept in place by antiseptic vaginal gauze tampon. After 48 hours tent is removed, and large one inserted and left for 48 hours. Examination with instrument or finger will then show that the internal os is completely obliterated. In severe cases it is well to use another large tent about one week later.

Results I have had from this treatment the

last 6 or 7 years have been highly satisfactory. All cases have not been cured, but results have been much better than from any other treatment. Especially valuable in cases of "incomplete development of the uterus," and in cases of endometritis. So far as relief of pain is concerned, tent dilatation is possibly no better than some of the intra uterine stems that have been devised, but is attended by much less danger.

Curettage can be of use only in the treatment of cases with endometritis, and one should remember that curettage is always an incomplete operation.

Incisions of the cervix are often made in the treatment of dysmenorrhoea. The incision can be of no permanent use unless they extend through the internal os, and then it is necessary to employ means to permit complete union of the incision, especially at the site of the internal os.

Electricity was used extensively some years ago, but it has been generally abandoned, as the results usually were unsatisfactory. The treatment of dysmenorrhoea in cases of uterine displacements, and in salpingitis and ovaritis, is the treatment of those diseases.

CHRISTIAN COUNTY MEDICAL SOCIETY.

Regular meetings are held at Taylorville quarterly. Membership 20.

Officers.

President.....W. T. Bridges, Stonington
1st Vice-President.....M. Hill, Taylorville
2d Vice-President.....C. M. Seaton, Pana
Secretary-Treasurer....F. E. North, Taylorville

The Christian County Medical Society met in regular session in the City Hall, Taylorville, Ill., Jan. 19, 1905, President W. T. Bridges in the chair.

The minutes of the last meeting were read and approved.

A paper on **Epidemic Smallpox**, was read by J. J. Conner, M. D., Pana. (See page 259.)

Dr. Conner's paper was discussed by all present. The discussion and opinions were unanimous in the fact that different severity of cases may develop from the same nidus of infection. Cases are frequently met with in which one member of the family may be seriously ill with smallpox, the eruption pronounced; some other member of the same household may take it with typical premonitory symptoms and only have six or seven marks of the eruption upon the body.

A committee was appointed to adopt a set of resolutions concerning the death of Dr. T. M. Johns, reported the following:

Resolutions of Condolence.

In memoriam of our beloved friend and fraternal brother, Dr. T. M. Johns, who departed this life on Jan. 13, 1905:

Whereas, The Almighty God in his allwise Providence has seen fit to remove from our As-

sociation and fraternal work our brother, Dr. T. M. Johns, therefore be it

Resolved, We deeply regret the loss of our brother from our midst and his absence from our meetings, of which he was a faithful attendant, yet we bow to the will of Him who doeth all things with a merciful hand.

Resolved, That we tender our sincere sympathy to the family who have been bereft of a good husband, a kind father and an ever faithful friend.

Resolved, That a copy of these resolutions be spread upon the minutes of our Society and that a copy be sent to the family of the deceased.

C. L. Carroll,
W. K. Wright,
D. F. Morton,
Committee.

DEWITT COUNTY MEDICAL SOCIETY.

Regular meetings are held in Clinton on the second Tuesday of January, April, July and October. Membership 25.

Officers.

President.....John H. Tyler, Clinton
Vice-President.....G. M. Robertson, Wapella
Secretary and Treasurer, A. E. Campbell, Clinton
Delegate to State Meeting...J. C. Myers, Clinton
Censors, J. C. Myers, J. M. Wilcox and D. W. Edmiston.

This Society met in quarterly session Jan. 31st, President J. H. Tyler in the chair. The Secretary said we needed to revise our constitution, as many variations had been made since the original was drawn up 45 years ago. A committee consisting of Drs. W. Edmiston, J. H. Tyler and A. E. Campbell was appointed to draw up a new constitution, which would harmonize with our State constitution, and report the same at our spring meeting. It was also suggested that our new fee bill be attached to our constitution and by-laws and that we also print a brief historical sketch of the early physicians in this county.

The Society then, at the suggestion of the officers, were asked to report mistakes they had made in medical practice. The President, J. H. Tyler, opened, mentioning some mistakes he had made 50 years ago, to the amusement and delight of all. Others followed, some mentioning mistakes of a ludicrous nature. The feature proved valuable, as the Society passed a pleasant and profitable hour.

Drs. Kirby and Wilcox were appointed essayists, and Pneumonia the subject for general discussion at our annual spring meeting.

His Inference.

Johnny—"Paw, did Moses have the dyspepsia, like what you've got?"

Father—"How on earth do I know? What makes you ask such a question?"

Johnny—"Why, our Sunday school teacher says the Lord gave Moses two tablets."—Pittsburg Post.

DECATUR MEDICAL SOCIETY.

Regular meetings are held in the Decatur Club Rooms the fourth Tuesday of each month
Membership 62.

Officers.

President.....Lynn M. Barnes, Decatur
Vice-President.....Clara Garber, Decatur
Secretary-Treasurer...W. C. Bowers, Decatur
Board of Censors: E. A. Morgan, F. M. Anderson, J. Stebbins King.
Program Committee: W. C. Bowers, Chairman;
E. J. Brown, W. C. Wood, A. Wilhelmy, L. M. Barnes.
Delegate to the State Society: Cass Chenoweth,
W. C. Bowers, E. J. Brown.

The Decatur Medical Society held its regular meeting on Jan. 24, 1905, at the Decatur Club rooms.

R. L. Morris read a paper on **Syphilis**, both in hospital experience and in practice. After having seen nearly every form of treatment tried, he came to rely on the common formula containing iodide of potassium and bichloride of mercury.

Will C. Wood read a paper on **Fractures and Dislocations about the Elbow**, and gave illustrations of cases by means of some good skiagraphs.

Cecil M. Jack gave a brief review of the year's work in medicine.

Will C. Wood also showed a specimen of the ruptured tube of an ectopic pregnancy where the severe pain in region of appendix caused the family physician to call the case appendicitis.

The case presented some anomalies. Although the pain was severe and only in the right side, the ectopic pregnancy occurred in the left tube.

At the operation the abdomen was found full of blood, yet by vaginal examination, even under ether no evidence of disease could be felt, not even bogginess of cul de sac of Douglas.

There is a feeling to hold the banquet in April, when the weather is warmer than the usual time of holding it in January.

VERMILION COUNTY MEDICAL SOCIETY.

Regular meetings are held the second Monday of each month in the city hall, Danville,
at 8:30 p. m. Membership 71.

Officers.

President F. N. Cloyd, Westville
Vice President S. L. Landauer, Danville
Secretary and Treasurer...C. E. Wilkinson, Danville

The regular monthly meeting of the Vermilion County Medical Society was held in the Council Chamber, Jan. 9, 1905, Dr. S. L. Landauer, Vice-President, in the chair.

The minutes of the December meetings were read, and adopted as read.

The Board of Censors reported favorably on the name of Dr. F. P. Johnson, of Hoopes-ton, after which he was elected to membership.

Members present were: Drs. Joseph Fairhall, S. L. Landauer, Benj. Gleesen, M. Sahud.

J. G. Fisher, T. E. Walton, E. M. Smith, W. A. Lottman, R. A. Cloyd, H. F. Becker, I. E. Huston, V. C. T. Kingsley, E. B. Cooley and C. E. Wilkinson.

The paper of the evening, on **Medical Legislation**, was very ably presented by Dr. Joseph Fairhall.

The essayist took up the subject in a very practical manner, stating that the requirements demanded of graduates in medicine is advancing each year, and that when one prepares himself for the profession he should have some protection from the "quackery" that is so prevalent.

After stating the manner in which the Medical Practice Act is enforced in different cities suggested that the Vermilion County Medical Society engage a wideawake attorney to prosecute illegal practitioners and that the members of the Society assist said attorney in obtaining evidence to prosecute violators of the Medical Practice Act.

Dr. T. E. Walton opened the discussion, followed by Dr. Sahud and others, and closed by the essayist.

The officers, Board of Censors and Delegates were elected as above.

Dr. Joseph Fairhall was appointed to learn the cost of printing the newly adopted Constitution and By-Laws.

Dr. R. A. Cloyd, Dr. Joseph Fairhall and Dr. Benjamin Gleeson were appointed to draft a "Fee Bill" for the County Society and report at the February meeting.

Meeting adjourned to meet at the next regular meeting.

SANGAMON COUNTY MEDICAL SOCIETY.

Regular meetings are held at the Lincoln Memorial Library in Springfield the second Monday of each month at 8 p. m. Membership 75.

Officers.

President W. O. Langdon, Springfield
Vice President R. D. Berry, Springfield
Secretary-Treasurer C. R. Spicer, Springfield
Directors, S. R. Hopkins, E. E. Hagler, A. O. Taylor

The regular monthly meeting of the Sangamon County Society was held in the Lincoln Library, Jan. 9, 1905, with twelve members present.

The minutes of the previous meeting were read and approved. The Board of Censors having reported favorably on the applications of Drs. Mortensen, of this city, Bradley, of Moxdesto, and Deal, of Riverton, these candidates were duly elected to membership.

Dr. Van Hook, of Mt. Pulaski, who was expected to report a case of Lymphatic Leukæmia, being absent, it was voted to extend an invitation to that gentleman to report his case at some subsequent meeting, which he should select.

Dr. Langdon presented a patient whom he had treated for a green stick fracture. The essay of the evening was read by Dr. R. D. Berry, on **Pneumonia**. A summary of the report follows:

He noted the prevalence of the dread disease and attributed its frequency and virulence to LaGrippe. He emphasized the gravity of the case in alcoholics. The mortality was placed

second only to tuberculosis and in late years in the large cities it had even outstripped that disease.

The cause, etiology and clinical symptoms were reviewed, the diplococcus of Frankel being held responsible for the primary cases.

As to treatment, the essayist dwelt especially on the cleansing of the alimentary tract and supporting the patient. He recommended the destroying of the sputum. The discussion elicited by the paper was principally regarding the treatment. Drs. Munson and Kreider referred to the importance of fresh air in the living room as a matter of prophylaxis. Dr. Kreider also said that much comfort could often be given the patient by strapping the side with adhesive plaster. Dr. A. D. Taylor thought that morphine should be used very sparingly, if at all, and very closely watched.

Dr. L. C. Taylor pointed out the fact that practically nothing of clinical value had been added to our knowledge of pneumonia in the past thirty years.

Dr. Langdon reviewed the lines of treatment of pneumonia as practiced twenty-five years ago. He is of the opinion that much good was done by blistering, hot mush poultices, etc.

The meeting closed in order.

A postponed meeting of the Sangamon County Medical Society was held Feb. 20, in the Lincoln Library, with fourteen members present. Feb. 13, the regular meeting night falling on Lincoln's birthday, the room was not available, so the meeting was postponed. The minutes of the previous meeting not being at hand, their reading was omitted. Dr. J. C. Walters was elected to membership. The applications of Drs. W. A. Halbert, of Salisbury, and A. R. Trapp, of Springfield, were read and referred to the board of censors.

Bills for current expenses amounting to four dollars were read and ordered paid. The following resolution was passed by the Society:

Resolved, That the Sangamon County Medical Society recommend to his excellency, Chas. S. Deneen, Dr. J. W. Pettit of Ottawa, for the position of Secretary of the State Board of Health.

Dr. Griffith entertained the Society with the report of an interesting case of **Pyelo-Nephritis**. The case was of exceptional interest because of the high temperature—at times reaching 108—while the pulse remained nearly normal. The patient was a female 29 years old, and emaciated. Family history negative. At 16 had menstruation suppressed by catching cold. An abscess formed on the knee and lasted three months. Had pneumonia at 20 and 22. Recovery complete. Some months later appendix removed, and recovered. Was then menstruating every eight weeks. Eleven months after her operation, was first seen by the author. Had been delirious and complained of severe occipital headache. Pulse slow, and high tension. No temperature and no secretion of urine. Fomentations over kidneys, and lgr. of calomel hourly until bowels were free. Sodii bromide to control delirium. First urine passed in 24 hours—7 oz.—was acid in reaction. Spg. 1030,

and almost sold on boiling. Excessive purgation and perspiration gave relief. Has now frequent desire to urinate and pain in the bladder. Two days later severe chill and temp. 104. During next 24 hours 1 oz. of urine was passed. This showed pus, blood and a few casts. Twenty-four hours later a chill and temp. 104, pulse 110. This recurred in afternoon—temp. still high; 2 m F. E. Jaborandi given. Temp. 104, pulse 86—severe headache. Three hours later temp. 105.4, pulse 92, and a chill lasting 1½ hrs. Six ounces of urine were now passed in two hours, and temp. fell. Headache continued. Similar condition continued a week, temperature rapidly changing from 101 to 106, the pulse remaining near 80. Severe headache and pain in the back continued. A week later temp. 103.6, pulse 66. Three days later temp. 107.2, pulse 74. Two days later temp 106.4; menstruating, with much pain in back and sides; urine scant; Spg. 1018, with less albumin than before. Three days later, expectorating blood, abdomen bloated and temp. 108, pulse 78, and kidneys acting fairly well. Nine hrs. later temp. 96.8, pulse 72. Next day temp. from 106.4 to 95.2—delirious, restless, headache severe, expectorating blood. Very little urine.

Four weeks later urine contained considerable albumen and pus. Patient up and around. Headache and restlessness continued, which was the conditionat last report.

The discussion was general, including most of the lesions of the kidney. Dr. Kreider referred to a case wher he had removed a kidney and ureter which were tubercular. He said that infections of the kidney may be primary, secondary infection extending to the ureters and bladder, or the reverse may be true. Dr. L. C. Taylor spoke of a case of tubercular kidney where he had demonstrated the bacilli in the urine. He agreed with Dr. Kreider regarding the sources of infections in the kidneys and bladder, and both implied that most of the kidney lesions were secondary. Dr. Hopkins said that many of the kidney lesions were associated with or followed the infectious diseases. Dr. Kelley mentioned an interesting case of a kidney lesion complicating lung trouble, suspected to be tubercular.

Dr. Dixon gave a strong testimonial for Agurin in the case of a patient who had not passed urine for many hours, and after taking this drug had passed 42 oz in 24 hours.

Dr. Hagler reported a case of glaucoma, in which the sight had been greatly jeopardized, if not lost by the untimely use of atropine.

The meeting closed in order.

MORGAN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Jacksonville the second Thursday of each month.

Membership 42

Officers.

President J. W. Hairgrove
Vice President Josephine Milligan
Secretary David W. Reid
Treasurer E. T. Baker

By invitation, the Jacksonville Ministerial Association met with the Morgan County Medi-

cal Society, at the Library, with the President, Dr. J. W. Hairgrove, in the chair. Members present, 16; ministers present, 13.

The minutes of the last meeting were read and approved.

On motion of Dr. Milligan, a committee was appointed to consider the matter of affiliation of our Society with the State Society for the prevention of Tuberculosis and to consider the matter of bringing up the bill before the Legislature. Seconded by Dr. Adams. Carried.

The following committee was appointed: Drs. Milligan, Baker and Baxter.

On motion of Dr. Black: Resolved, That the Library Committee be hereby authorized to raise, by subscription, a fund for cataloging, analyzing and building up our library, and that the subscribers to this fund shall, through the Librarian, have entire control of the disposition of such fund, within the limits of our By-Laws. Carried.

The subject for the evening was, "The Relationship Between the Two Professions."

The principal paper of the evening was by Rev. A. B. Morey, D. D., and was a carefully prepared, earnest presentation of the many phases of the relationship and community of interest between the two professions. The paper was well received by those present.

In the absence, on account of sickness, of the next speaker on the program, Dr. F. P. Norbury, Dr. Reid presented a few points of relationship, especially those that lent themselves to a humorous treatment, affording considerable entertainment thereby.

The papers, as well as many points not mentioned in either paper, were thoroughly discussed, most of those present taking part in the discussion.

Altogether the meeting was one of pleasure and real profit, and fulfilled its intention of bringing the two professions in the city into closer touch, better understanding and stronger good-fellowship.

New Incorporations.

The Secretary of State at Springfield has granted licenses to corporations as follows:

Dr. Terriff Medical Association, Chicago; capital, \$2,500; manufacturing toilet sundries; incorporators, James A. Terriff, K. Hoyt Stone, Jr., and Jeremiah F. Bourke.

Abtena Remedy Company, Chicago; capital, \$25,000; manufacturing drugs; incorporators, Louis Abt, William H. Abt and Joseph Louis Abt.

Illinois State Association for the Prevention of Tuberculosis, Chicago; prevention of the prevalence of consumption; incorporators, Charles L. Mix, William E. Quine, Arnold C. Klebs.

Marriages and Deaths.

Marriages.

Dr. Cecilia P. Gallogy to Mr. C. F. Kimball, both of Chicago, at St. Louis, Feb. 28. This was a "real life" romance, which began in the Hahneman Hospital, where Mr. Kimball was a patient and Dr. Gallogy the attending physician during a long and serious illness.

John K. Jameison, M. D., Chicago, to Miss Ethel Gibson, of Waukesha, Wis., Jan. 19.

Fremont C. Knight, M. D., Waukegan, Ill., to Mrs. Mary Holman, at Chicago, Jan. 25.

Deaths.

L. C. Bean, M. D., Dartmouth College, New Hampshire, 1854, of Waukegan, Ill., Feb. 20, aged 73.

John A. Vixtrum, M. D., Vanderbilt University Medical Department, Nashville, Tenn., 1883, of Princeton, Ill., died at Colorado Springs, Colo., from tuberculosis, Feb. 9.

Richard Joseph Nagle, M. D., College of Physicians and Surgeons, of Chicago, 1895, died at his home in Dixon, Ill., Feb. 12, aged 39.

John H. Gale, M. D., Illinois, 1893, of Chicago, died at Chicago Union Hospital, Feb. 18, from heart disease, aged 68.

Dr. Walter S. Christopher, known nationally as a specialist in children's diseases, died suddenly of heart failure at his residence, 508 Dearborn avenue, March 2. He had been ill since last August, but in January it was hoped he would recover. Over-work caused a nervous collapse.

For some time the physician had been in the care of a trained nurse. Dr. Robert H. Babcock had been in daily attendance. Death came while Dr. Christopher was walking in his room.

Dr. Christopher was a member of the board of education, but resigned in 1900 to devote his entire time to his practice. While in office he inaugurated medical inspection of the public schools. He introduced the child study department, and a movement to require a physical examination of all candidates for entrance to the normal school.

Born in Newport, Ky., in 1859, Dr. Christopher received his professional degree in 1883 from the Medical College of Ohio at Cincinnati. His first work was as an interne in the Cincinnati hospital, where he assisted in the children's clinic.

Coming to Chicago in 1891, Dr. Christopher was appointed professor of diseases of children at the Chicago Policlinic. He was a member of many medical societies, and the author of numerous pamphlets on medicine.

Mrs. Christopher and two children, Fred and Alice, are living.

News Items.

EVANSTON NEWS.

Dr. F. H. Edwards has become a Christian scientist and is credited with some wonderful cures by his new methods.

The report of the Evanston Hospital for the year 1904 shows 305 patients to have been admitted. The deaths for the year numbered 16, and 226 operations were performed, of which 20 were for appendicitis; 15 cases of typhoid were treated without a death.

The report of St. Francis' Hospital for 1904 gives 217 patients treated, with a mortality of 18. St. Francis' Hospital admits cases of contagious disease, and a certain number of consumptives, as well as other incurables.

Dr. Geo. Tyson, of Evanston, suffered a fracture of one of the tarsal bones some two months ago, but has attended his patients on crutches ever since.

Chicken pox is epidemic in Evanston.

The Evanston Hospital is contemplating the erection of a maternity pavilion, something much needed.

Dr. Wellington T. Stewart and wife, 978 Douglas boulevard, Chicago, have been in Hot Springs during the month of February.

Dr. Samuel Dodds, of Anna, is taking post graduate work in Philadelphia.

STATE EPILEPTIC COLONY.

Senator Dixon has introduced a bill appropriating \$250,000 for an epileptic colony.

PROHIBITING VIVISECTION.

Senator Hill has introduced a bill regulating scientific experiments on human beings or animals, and prohibiting vivisection.

Dr. Gustav Kolischer, of Chicago, is seeking a divorce from Mrs. Elsa Gruber Kolischer, of Vienna, Austria, on the grounds of desertion. Mrs. Kolischer is a daughter of Prof. Gruber, of the Vienna University.

Dr. and Mrs. Samuel Sherin, of 5021 Prairie avenue, have gone to Europe to be absent three months.

Drs. W. H. Hipp and **N. A. Graves** have resigned from the staff of the Cook County Hospital. The new regulations at the institution are the cause of their action, the specific rule to which they objected being that requiring the staff members to visit the hospital at least three times a week.

They first requested that this rule be changed, and when President Brundage refused they announced their intention to resign. The resignations will be accepted.

"We found that we could not live up to the rules," said Dr. Hipp. "Our time would not permit it."

The Presbyterian Hospital, Chicago, received \$15,000 from the estate of Mrs. Harriet A. Jones, recently deceased.

Dr. F. W. Buckmaster, of Altamont, has sold his practice to Dr. R. D. Barclay, of Chicago. Dr. Buckmaster has left the State.

Decatur—It is now understood that Dr. B. F. Slusher, charged with causing the death of a woman, has expressed a willingness to come home and stand trial, provided he can be released on bond. He has been in hiding in Texas and Mexico since leaving here.

Push Oak Park Hospital Plans.

The Oak Park Hospital Association, in spite of opposition from residents of Fair Oaks subdivision, in which the site of the proposed institution is located, is proceeding to carry out its plans. George L. Harvey, it was announced recently, has been chosen to draw plans for the building.

Doctor Stevens is Sentenced.

Dixon, Feb. 6.—Special.—Dr. Wade Stevens has been sentenced to the penitentiary for from one to ten years, for causing the death of Alma Barnhardt. His attorneys will carry the case to the Supreme Court on a writ of error.

Dr. N. A. Piazza Ends Life Because He Thinks Wife's Affections Are Lost.

Because he believed his wife no longer loved him, Dr. N. A. Piazza, 36 years old, went to the Maine Hotel, 3856 Cottage Grove avenue, and committed suicide. His body was found one morning by Prof. Allunsha, 3859 Cottage Grove avenue, and Dr. T. S. Greet, who went to the hotel on a request from Mrs. Piazza. She had received the following letter in the morning mail from her husband:

My Dear Mama: Although you have driven me to desperation, I cannot stop loving you and cannot live without you. Come to the Maine Hotel and you will find me dead. Bromide of potassium will do it better than morphine.

I hope you will love my body a little before you bury it. I will forgive you all and hope God will not punish you for this. NAT.

Dr. Piazza had a sanitarium in Drexel boulevard. He had attempted suicide several times by taking morphine.

Dr. Piazza's name does not appear in any directory.

Dr. Chas. A. Nichols, of Urbana, has been declared not to be the legal husband of Mrs. Susan C. Day, formerly of Urbana, but now of Chicago, the divorced wife of Assistant United States Attorney General Wm. A. Day.

The Day-Nichols case is declared to be almost without analogy in legal annals, there being only one other in history in which a man claimed a woman as his wife, to have her deny it.

At the time of the presentation of the name of W. A. Day to the senate for confirmation,

Mrs. Day went to Washington to fight her former husband with the record of their divorce, it was said.

At the same time Dr. Nichols created a sensation by announcing a secret marriage, which was denied by Mrs. Day. Soon after, while in her yard, Mrs. Day fired a revolver at the physician, but none of the shots took effect. The couple were indicted by the grand jury for living together, but the indictment was quashed.

In the litigation which has been proceeding since Dr. Nichols made his claim, the estate of Eli Halberstandt, father of Mrs. Day, has dwindled from \$30,000 to almost nothing.

Mrs. Day declared the physician to be a penniless adventurer, seeking a slice of her money, while he asserted he merely sought to put himself right before the people, as he had lived at the home of Mrs. Day for years and their intimacy had caused considerable gossip.

Evidence in the case was taken in Louisville, Ky., where reputable witnesses testified Dr. Nichols had introduced Mrs. Day as his wife, but this was declared by Judge Philbrick to have no bearing on the case.

Judge Philbrick held that a common law marriage in Illinois must be patent to be public and must not be shrouded in secrecy. Even if the parties allow the fact of the marriage to leak out by accident, said the court, that does not serve the purpose.

Testimony had been introduced by Doctor Nichols to prove that Mrs. Day admitted the marriage to several persons. The voluminous evidence in the case was of a highly sensational nature, concerning the relations of the couple while Doctor Nichols lived at the Day home. The attorneys for Mrs. Day were accused of engaging a Chicago detective, Sam Neff, who robbed Doctor Nichols of important letters addressing him as "My dear husband," and signed by Mrs. Day.

Counsel for Doctor Nichols will appeal to the Appellate Court. Meanwhile the time limit on mortgages on the Halberstadt estate will expire and the property will pass to creditors.

Dr. J. T. White, of Freeport, testified recently in a murder trial at New London, Mo. In this case a Dr. Watson was on trial for poisoning his wife and then throwing her from a bridge into a stream of water in such a way as to make it appear that she had been drowned.

The testimony of Dr. White revealed the fact that with the use of guinea pigs, jack rabbits, dogs, mice, etc., he carried on a series of experiments covering a period of several months, obtaining the results from drowning and morphine and other poisons. The observations made and the results secured were related to the jury in the minutest details by Dr. White.

According to Dr. White, he used at least fifty subjects in pursuing his investigations. Part of the number were drowned in water colored blue, so that he might trace the water into

the middle ear and through the lungs, stomach and other organs of the animals. Others were given doses of morphine and the effects of it noted on the brain, lungs, heart and other organs, together with the blood of the various subjects.

He had charge of the second autopsy held over the body of Mrs. Watson for the defense, and that he was assisted by Dr. W. T. Waters and Dr. Ragan, of New London, and Dr. J. S. Bradley, of Frankford. Sheriff Whitmore and others were present. He said that he found eight or ten drops of fluid in the middle ear, which he accepted as a sign of drowning. The witness stated that with his experiments in drowning animals he had found colored fluid usually in the middle ear.

Water in the stomach was also given as a sign of drowning, as he said that in most instances he found the colored fluid in the stomachs of the animals drowned. Fluid was also detected in the lungs of the animals. In cases of poison, the blood was dark and was also clotted about the heart.

According to Dr. White, none of the dark colored or clotted blood was found when he examined the body of Mrs. Watson. Judging from the observations at the time, the witness said that Mrs. Watson was drowned. Under the microscope the doctor said that he detected foreign materials, indicating sand in the fluid taken from the lungs of Mrs. Watson.

In the cross-examination, Dr. White said that he had made all of his experiments on animals since the accident in which Mrs. Watson was killed, and that he received \$100 for his work at the autopsy.

Dr. Watson was acquitted of the charge of murder.

Wanted—Index to Volume III, 1902. Twenty-five cents will be paid for it.

Millions in It.

"What with measles, croup, and all that," remarked the family man, "children are a great care, but they're great blessings, too."

"They are so," replied the stranger. "I don't know how we should get along without them."

"Ah, you're a family man, too?"

"No; a physician."—Philadelphia Press.

Satisfied Ambition.

A poor young Topeka chap remarked, as they started him to the hospital with appendicitis: "At last I have a chance for an opening."—Topeka Journal.

Fatal Dose.

"I wonder," said the young wife, as she mixed the dough, "why they call this 'angel cake?'"

"Probably," replied her husband, "because any one who eats the cake is in immediate danger of becoming one."—Philadelphia Press.

In the End.

"A man may get riches and still be unhappy in the end."

"Yes, there's always the chance he'll have gout in the feet."—New Orleans Times-Democrat.

True to Principle.

"What happened to Rollingan?"

"He drowned."

"An' couldn't he swim?"

"He did, for nine hours; but he was a union man."—Yonkers Statesman.

Grafting.

She—"Is skin grafting a late discovery?"

He—"No, it is only a new branch of an old art; all grafting is a skin process."—Detroit Free Press.

Needed Faith.

Madge—"Does she believe in the faith cure?"

Majorie—"Well, she is using a lot of preparations to make her face beautiful."—Judge.

Why He Took Up Medicine.

One of the Girls—"Why, there's Mr. Scorchers! It seems strange that he should be studying medicine!"

The Man—"Not at all. Doctors are allowed to exceed the speed limit."—Life.

Patients.

Dr. Doome—"Have you lost any patients lately?"

Dr. Dunne—"Only two."

Dr. Doome—"From what cause?"

Dr. Dunne—"Nonpayment of bills."—Town Topics.

Pair of Birds.

"Isn't the doctor's wife beautiful? She has a neck like that of a swan."

"Quite so. And the doctor has a bill like that of a pelican."—Judge.

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Trial Quantity
Free to Physicians

HIGHLAND ILL.

tioning The Journal A. M. A. a copy of the Monograph by Dr. J. Henry Dowd, of Buffalo, "The Diagnosis and Treatment of Urethritis—Chronic or Specific." This is probably the most interesting and valuable contribution on the treatment of this disease published during 1904. Address Gardner-Barada Chemical Co., 42 River St., Chicago.

The University of Halle, Germany, has conferred upon Dr. Willy Merck, member of the old house of E. Merck, Darmstadt, established in 1668, a very high distinction, namely, the honorary degree of Doctor of Medicine "in recognition of numerous meritorious contributions looking to the advancement of the therapeutic side of medicine."

Medical Practice For Sale.

I want to sell my practice and office building with fixtures; practice amounting to \$2,500.00 cash, with nice office building of 3 rooms, in a splendid town of 700 in the best agricultural section of South Eastern Illinois; price, \$800.00. A bargain to a good man wanting a general practice among a prosperous people. Will introduce the buyer. Have a McDannold operating chair, good as new, cheap. Address, A. X., care Illinois Medical Journal.

Empyroform, a New Tar Preparation.

By Dr. F. Kornfeld, Assistant at Prof. von Fritsch's Polyclinic, Vienna.

Abstracted from Zentralblatt f.d. gesamte Therapie, No. 12, 1904.

Incited by the favorable results reported by the clinics of Neisser, Pick and von Duering, I tested empyroform, which is a condensation product of birch and formalin, in my own dermatological practice. The most satisfactory results were gotten from a 5% to 20% empyroform-vaselin ointment, a 5% to 20% empyroform-Lassar's paste, a 50% empyroform-vaselin paste, and a 5% to 15% liniment. Of much value was also the dry paint of empyroform $\frac{1}{2}$ oz.; talc. venet. $2\frac{1}{2}$ drams; glycerin $2\frac{1}{2}$ drams; aq. dest. 5 drams, well shaken before use.

Even the 50% paste smells but slightly of tar, and only very little shading of the skin occurs. In contradistinction to tar, it causes neither local irritation nor systemic intoxication.

We used it in a whole series of the most varied chronic eczema, with good results, and never had a relapse. Thus encouraged, we applied it in cases of less torpid, subacute inflammation; and the course of these was also influenced most favorably. Some of them had been absolutely intolerant of tar in the past; but we found that they could use it without reaction after a course of empyroform. Empyroform first caused retrogression of the redness and infiltration; the itching, burning and tension become less; and in an astonishingly short time there was complete cure. This

was especially seen in those obstinate cases that had proven recalcitrant to the usual measures, including tar.

It proved effectual in a large number of weeping eczemas of the hands, fingers, forearms and face, even when fresh. In seborrhoeal eczema surprisingly good effects were noted, and these must be attributed to the fact that it contains the disinfectant formalin in addition to the reducing agent tar. Much benefit was also experienced in prurigo, psoriasis and *licher urticanus*.

The Mississippi shore of the Mexican Gulf is certainly a delightful place at all seasons, but especially in winter is it most desirable for those of our Northern people whose health does not justify remaining in their own vigorous climate. The Biloxi Sanatorium at Biloxi, Miss., has completed a set of buildings purposely designed and equipped for the best class of patronage. See their card elsewhere in this issue.

Local Anesthesia with Eucaïn and Eucaïn-Adrenalin.

By Dr. Otto Simon, First Assistant in Prof. Czerny's Surgical Clinic at Heidelberg.

The number of operations at Czerny's clinic and dispensary increased respectively from 1,717 and 1,035 in 1897 to 1,955 and 1,502 in 1902. The increase in the number done by local anesthesia alone was from 91 and 21 in 1897 to 185 and 193 in 1902. During the latter year he witnessed the death of a patient from cocain anesthesia. Only 7 cc. of a 1% cocain solution had been injected into the urethra, but convulsions, arrest of the heart and respiration followed immediately. The patient was a young man with sexual neurasthenia and chronic prostatitis. The fluid had remained in the urethra only two minutes at the utmost.

Since then eucaïn has been exclusively used for anesthesia, with or without adrenalin, and it has been found perfectly satisfactory. It is comparatively non-toxic, and an isosmotic, warmed solution induces anesthesia as effectively as cocain in the same strength. Adrenalin enhances its action, and concentrations of 1 to 20,000 are free from by-effects in subcutaneous injections. The Oberst technic is preferred. 188 operations done with eucaïn are given. The supplementary adrenalin was particularly valuable in extirpation of deep tumors, lipomata, adenomata of mamma and struma, excision of small tumors of tongue and lips, angiomata, in operating on the jaws, and in small plastic operations. Eucaïn is particularly useful as a preliminary to cystoscopy.—Journal of the American Med. Ass'n., August 27, 1904, from Muench. Med. Wochenschrift, July 19, 1904.

Calcalith.

In treating rheumatism with Calcalith it is well to remember that the system becomes, after a while, clogged with the effete matter freed by the remedy. Therefore in old-standing

cases it is well to cease the administration of Calcalith after two weeks' use and, to exhibit for a few days eliminants (calomel, podophyllin, leptandrin salines, etc.) If then Calcalith is again pushed freely the system will respond and the patient experiences marked relief. Salithia—the "other twin" of the Alkaloidal treatment for the uric acid diathesis—should be given daily while Calcalith is exhibited. The rationale is plain. Salithia acts as a diuretic laxative chologogue and anti-lithic. The salt should always be given the first thing in the morning and, in severe cases, again at night. Calcalith usually works well in ten-grain doses t. i. d. If with each dose half a pint of barley water is exhibited the results are improved. If you cannot cure your gouty or rheumatic cases, use Calcalith and Salithia and see how easy it is to do so. Literature and samples of Calcalith sent on request by the Abbott Alkaloidal Co., Ravenswood, Chicago, Illinois.

NOTES FOR BREAD PILLS.

Injunction granted Against "Medical and Surgical Institute" of Chicago.

The injunction granted by Judge T. E. Ames in chambers, a few weeks ago, restraining the Illinois State Medical and Surgical Institute of Chicago from disposing of \$25,000 worth of promissory notes given by a couple of hundred persons in this vicinity in payment of services rendered, has been dissolved by Judge Johns before whom the suit was taken on a change of venue to the Moultrie county circuit court. William H. Truitt of Findlay was made defendant in the suit, he having purchased many of the notes.

The suit was brought by 195 persons who allege in their bill of complaint that all they received from the "institute" was bread for which they had given notes of various amounts and from which they had received no benefits.

Saline Laxative.

"Were I compelled to practice with only two remedies I would choose the effervescent form of magnesium sulphate and the sulphocarbolates," said an old and well-posted practitioner to me recently. * * * The "Saline Laxative" of the Alkaloidist is diuretic, refrigerant, laxative, cathartic and chologogue. It may be given to the youngest infant or the oldest and most debilitated patient with safety. Its use does not induce a habit. Given in

teaspoonful doses in a glass of water every morning before eating will cause a normal daily stool. Obstinate cases will require repeated or larger doses. An excellent plan, when prompt and thorough elimination is essential, is to give two teaspoonfuls in a glass of hot water the first thing upon wakening in the morning. If the night prior four to six doses of calomel and podophyllia (a a 1-6) have been exhibited at half hourly intervals, this procedure will "flush the mains" and "rid the system of debris."—Extract from article in Medical Summary for December, 1904.

Literature and sample of Saline Laxative will be sent on request to the Abbott Alkaloidal Co., Ravenswood, Chicago, Illinois.

How to Prevent the Disagreeable Results of Using Antitoxin.

These resulting symptoms are:

- I. Susceptibility to another attack.
- II. Oedema, Urticaria and Arthritis.

I. By preventing saturation with toxin we prevent the system forming its own antitoxin and as a result, do not gain a permanent immunity. We can, at least in part, overcome this objection by using antitoxin in small but repeated doses—just enough to check but not abort the disease. This can be done only if under constant supervision and even then would be dangerous if patient is an infant or the trouble is laryngeal.

II. The resulting Urticaria, Oedema or Arthritis we have so often had after using any of the Serum Antitoxins is **easily and surely preventable** by giving the patient very large doses of **Potassium Acetate**, well diluted and free action of the bowels with low diet. I now prescribe according to amount of Antitoxin used, from 5 to 30 grains of the Acetate of Potash in a glass of water every hour for from two to six days or even a longer time, and by thorough test have been enabled to tell my patients, "use enough of the medicine and you will have no disagreeable symptoms." This has been my finding even in a case where I used 68,000 units (sixty-eight thousand) of Diphtheria Antitoxin in a seven (7) year old boy during a period of 5½ days. To explain action—This favors elimination which has been overtaxed by foreign serum.

Please report this and let other doctors test it. It will pay to try.

Dictated.

C. G. Roehr, M. D.

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THE CLINICAL EXPERIENCES WITH SAUERBRUCH'S OPERATIVE CABINET.*

BY D. B. HAHN, M. D., Breslau, Germany.

Ladies and Gentlemen:

No one knows better than myself, how little fitted I am to speak before this distinguished society, after having scarcely set foot upon this continent. The more so is this true, as I did not come to teach, but to learn. However, I could not resist the kind invitation of your honored president, and so I have selected as the subject of my paper a new method for performing operations, the development of which I had the good fortune to witness from beginning to end, and with which I had some personal experience. It concerns Sauerbruch's operative cabinet. The method excited unusual attention everywhere.

A short time ago, when I was present at the French Surgical Congress in Paris, I came across this topic on the program of the meeting, and a lively discussion showed the interest which this method awakened. Since the subject is familiar to you at least by name, I permit myself to hope, that it may be of some slight interest to you.

In October, 1903, I was present when my chief, Professor Mikulicz of Breslau, gave to one of the youngest externes of his clinic this suggestion, to find a way of avoiding the pneumothorax, during intrathoracic operations, a problem which naturally was very dear to a surgeon like Mikulicz, who has done so much for the brilliant development of abdominal surgery, and whose ambition naturally strove to overcome also the obstacle, which until now had prevented a similar development of thoracic surgery.

Perhaps Sauerbruch was especially well fitted for this work, as his former scientific

training gave him a knowledge of physical laws. In fact, we his colleagues, soon learned of the beginning and progress of his labor, and after the first surprising successes in experiments on animals, this subject formed the topic of our daily conversation.

I need only to mention here, that the respiratory work of the lungs is done by two functions; namely, the active work of the thoracic muscles and the natural elasticity of the lung parenchyma. The equilibrium of these two functions is guaranteed only as long as the pleural cavity remains closed and air-tight. The moment this no longer is the case, the elasticity of the lung will preponderate: the lung will collapse, and we have a pneumothorax with all its dangerous sequelae.

A simple consideration must tell us, that a pneumothorax would be preventable, if it were possible, either to produce within the lungs an increase of pressure, or to decrease the atmospheric pressure upon the lung from without. Sauerbruch chose the second method.

After some other experiments, which were quickly abandoned, Sauerbruch came to the idea of inclosing the field of operation, that is to say, the thorax, in a kind of box which represents a vacuum, or more correctly, which contains rarefied air, so as to produce an increase of air pressure from within, that prevents the lung from collapsing after the opening of the pleural cavity. It was evident that operating under such conditions would be most difficult, and it was but a step to the idea of placing the whole animal, with the exception of the head, in an experimenting cabinet in which there was a lower pressure than the atmospheric. A simple idea, a veritable egg of Columbus, only no one had until then thought of setting it upon its point.

The cabinet first constructed was a cube with wooden walls, which were lined with

*Read before the Chicago Medical Society.

tin and which was as air-tight as possible. This furnished a space of two cubic meters, just sufficient to hold an operating table and two men. In one wall there was a round opening, which was closed off by means of a rubber septum perforated in the middle; on the opposite wall a door, through which the room could be entered or left; a cylinder was fitted into the third wall, standing in communication with an electromotor, by means of which the air was pumped out of the room. It was at all times possible to note the rarefaction of air by means of a mercury manometer, and to control it by a ventile.

The animal used for the experiment (dogs being used almost exclusively) was placed on the table, its head forced through the above mentioned opening in the rubber septum and thus placed outside of the cabinet, so that the animal breathed under natural atmospheric pressure. The narcosis was given under the same condition.

It was indeed a spectacle for me, which I cannot easily forget, when in January, 1903, I assisted at one of these operations the first time. The operation was already in full progress and could easily be observed through the glass ceiling of the chamber. Sauerbruch with an assistant was in this most primitive box, in which the operators could scarcely stand upright. After the resection of the sternal portion of a great number of ribs, both lungs lay bare. The pericardium also was laid bare and through an incision in this latter the heart was in view. Each one of these organs was carrying out its physiological function before the very eyes of the observers.

The heart made its rhythmical contractions, the lungs their inspiratory and expiratory movements, at the same time expanding wonderfully. My astonishment increased when I beheld Sauerbruch removing all the ribs leaving only a few centimeters, attached to the spine without interfering in the least with the respiration. Like so many interesting phenomena in the realm of physiology also the surprising fact has been given through Sauerbruch's work, that the active work of the thorax, to which the action of the lung is bound, is sufficiently kept up, if only

half of the diaphragm and some slight remnants of ribs with the most necessary muscular attachment remains. I should like to ask here, whether we are not justified in interpreting this surprising phenomenon much more in this way, that the lung itself takes an active part in the inspiratory expansion, a possibility, which, as you know, was denied until now.

During the first month of the past year Sauerbruch operated on from seventy to eighty dogs by this method, a great number of which survived for a longer or shorter time after very serious surgical operations upon the lungs, the mediastinum, the heart and the oesophagus. A considerable number has even remained alive, a number of the others died from infection, which as you understand, can scarcely be avoided in dogs. Frequently aseptic and careful operating was not even attempted.

The method had advanced to this point, when Sauerbruch and Mikulicz presented it to the Surgical Congress in Berlin. Up to this point also the respective publications go, which you will find with all their technical details and physiological discussions in the "*Zentralblatt für Chirurgie*," in the "*Verhandlungen der Deutschen Gesellschaft für Chirurgie*" and in the "*Mitteilungen aus den Grenzgebieten*." Until now, as far as I know, no further experiences with this method, especially those concerning the results of operations on man, have been published by the Mikulicz clinic. At any rate, nothing has come to my notice since the first of September, when I left Breslau.

The results, obtained until then, were so encouraging that a man like Mikulicz had a right to dare to attempt the operation on man. The more so, as it almost always concerned cases otherwise incurable and lost, or localities, which until now had been inaccessible to the knife of the surgeon. Professor Mikulicz, who had followed the entire development of the method with lively interest, now had a cabinet built in his clinic on a grand scale, which not only cost a great deal of money, but also produced a lot of technical difficulties.

This chamber has the shape of a cube and

contains forty cubic meters of space. Floor and ceiling, as well as the four walls, up to about one meter, consist of strong iron, the rest of the walls of very strong glass. The whole thing is constructed absolutely airtight, as well as the double door, which is held tightly closed by means of an iron beam, pressing against a thick rubber incasement. Opposite this there is, exactly as in the original dog chamber, on a level with the operating table a circular hole which is closed by a rubber septum. The hole again has a circular opening, through which the head of the patient can be forced without difficulty, whereupon the septum spontaneously closes around the neck like a cuff. A third wall bears the evacuating apparatus, representing a suction air pump, which is driven by a one horse power electromotor and which has a suction power of three hundred liters per hour. Next to it there is a ventil, which permits the renewal of air within and regulates the rarefaction of air. All this is managed inside of the cabinet. In case the electromotor should accidentally stop working there is a hand pump in reserve.

A negative pressure of ten millimeters mercury is sufficient to guarantee the expansion of the lung. As far as I can remember, the air pressure was approximately fifteen millimeters below the atmospheric. The entire cabinet therefore corresponds quite closely with the little experimental cabinet, and only in one respect does it differ essentially. Since the atmospheric pressure upon the entire venous system is increased in this chamber the venous circulation would naturally go on considerably slower, the aspiratory work of the pleural cavity would be much diminished, and in this way more work would be exacted of the left ventricle. This obstacle is overcome by placing the whole body of the patient from the ribs down into a rubber sac, which communicates with the outer air; thereby keeping out the influence of the pneumatic cabinet and placing the venous system under the ordinary atmospheric pressure. But this sac was not used in connection with all our operations. The cabinet is lighted by an electric arc light, fastened to

the ceiling; a transportable incandescent light is also at hand.

Let us now proceed with the operation: The patient, not yet fully anaesthetized, is brought into the cabinet and placed upon the table, his head, forced through the rubber cuff, rests outside upon a small table, beside which the anaesthetist has his seat. The door of the cabinet is closed and the apparatus set in motion. There is just room for the operator, two assistants, one man who handles the instruments and another one who manages all the mechanical apparatus. Besides that there is room for two small tables on hinges, on which the instruments, the dressings and the irrigating fluids are placed. As soon as the manometer shows an air pressure of minus twelve to fifteen millimeters, the operation begins.

By this time it is likely that various doubts have arisen in your minds. You will ask: "Is not the anaesthesia most difficult under such conditions?" Well, taking for granted, that we have a conscientious and capable anaesthetist, the narcosis can be carried out in the usual way and I cannot say that we had any more accidents in the cabinet than under ordinary conditions. The anaesthetist, as well as the operator can watch the pulse. One need not fear the compression of the neck and its vessels by means of the rubber cuff, although the latter clings tightly under the atmospheric pressure. Besides being able to use a sign language the operator and anaesthetist are in communication by means of a telephone. Nevertheless, it must be admitted that in cases of immediate danger, such as asphyxia, etc., it is somewhat more difficult to employ energetic measures than under ordinary conditions. Of course, the body of the patient is, as one might say, divided into two parts; the anaesthetist who is outside can not come near the trunk, and those inside the cabinet can not reach the head. Possibly you will wonder, how the operator can stand it within this cabinet. "Is it not most difficult to breathe in this rarefied air?" Well, I have myself operated for hours with Professor Mikulicz in this chamber, and I can assure you that I felt

quite well. To be sure the activity of the sudoriferous glands is increased, but operating in our cabinet is no worse than in the tropical heat of an operating room, facing the south and being exposed to the rays of a noonday sun." Sauerbruch calculated, that in the cabinet with under-pressure of ten millimeters mercury one lives under the same atmospheric pressure as on a mountain of three hundred meters. This certainly does not indicate any deterioration of the breathing condition.

I am afraid that I have already gone too far into detail in the introductory part and in the consideration of the technicalities of the method, and I will now turn to that, which will interest you most, the results we obtained in our operations on man. I judge the number of the operations, performed in the cabinet during the months of May, June and July, was at least a dozen. I regret that I cannot give any reliable statistics, since at this moment I have no data at hand, so I must depend entirely upon my memory. Moreover, as an assistant of the private clinic it was not possible for me to follow those cases closely, which were operated upon from the University clinic. Among these, there were operations upon the lung, the oesophagus, the heart and the thorax itself. First I will speak about the oesophagus cases, as in the entire undertaking Professor Mikulicz had the oesophagus principally in mind, and it was just in this direction that he had placed his hopes on the new method. The oesophagus lies so hidden and covered by vital organs, that the gaining of an entrance is of itself difficult and venturesome. After all attempts at preventing a pneumothorax from the front proved in vain, the attempt was made to accomplish this from the back. Although in individual cases in experiments upon animals one succeeded in preventing the opening of the pleural cavity, this way also soon proved inadequate. This inaccessible region in the first place Mikulicz intended to attack with the help of the pneumatic cabinet, but it was just this part of the work which did not turn out encouragingly. To be sure, on dogs we succeeded in resecting a couple of inches of the oesophagus and uniting

the ends, and if the animals finally died away, it was for the most part due to the fact that it was impossible to keep them properly quiet and to nourish them through a stomach fistula. Since this annoyance can usually be voided in a human patient, one had a right to expect, that the thing would go on more smoothly. Alas, we encountered here other great hindrances. Among these in the first place the shock, which was produced by displacement of the lung or occasionally of the heart, and by operating at such a depth. The shock was so enormous at times that threatening phenomena appeared and the operation had to be stopped. Or a carcinoma proved inoperable after laying the oesophagus bare. A few times it resulted in infection and empyema.

A lady who had carcinoma of the oesophagus, was given under my special care and I followed the course of the treatment with special attention. In this patient we had previously established a stomach fistula, which had improved her nutrition essentially. Soon after the opening of the pleural cavity and in the displacement of the lung she became dyspnoeic and pulseless and succumbed soon after. Whether this is to be attributed to the narcosis or to shock, I do not dare to say. I should like to describe to you here a little more in detail the Mikulicz method of operating, in order to make it clear to you, that these operations upon the oesophagus must necessarily always produce a certain shock. We must give up trying to build a large thoracic flap in order to have an easy way to get at the oesophagus, since this would render afterwards an air-tight reunion impossible, or at any rate very tedious. So we perform the simple thoracocentesis in the fourth intercostal space through an extensive parallel incision. The wound is then forced into a wide gap by forcibly tearing the ribs apart by means of a automatic retractor, which is constructed like the one used for tracheotomy, only being much larger and stronger. This act, which frequently requires considerable strength, as well as the separation of the lungs, is especially apt to produce a severe shock. The remaining instruments are the same as are generally used at the clinic, only

the scissors, forceps, needle holders, etc., must be considerably longer. Manipulating them must also be learned. Hence, as long as I was connected with the clinic, the results of our oesophagus operations were not satisfactory.

Furthermore, several cases of gangrene of the lung were operated, as far as I know, with good results. I know, you will object: Gangrene of the lungs has been operated with good results long ago. To be sure, not only that, but there has even existed an established surgery of the lungs, which was developed into its modern form and with its special technique by Quincke of Kiel. I know from my assistantship in Hamburg-Eppendorf, that Lenhartz got very good surgical results in his work on gangrene of the lungs without the aid of the pneumatic cabinet. These, however, were only very lucky cases, so called show-cases; which had been selected especially. One decided to operate only, when the pleuritic adhesions could be expected, and when the location of the lung focus could be previously determined with comparative certainty. Everyone knows how difficult this is at times, but to search for the focus during the operation, that was, candidly speaking, impossible. In the pneumatic cabinet, however, this could be done with complete composure.

I also witnessed an operation upon the heart, which was performed by one of Mikulicz's assistants. It was a stab wound. The man was brought into the cabinet in a collapsed condition, but with a fairly good pulse. After resecting two or three ribs the pleural cavity was opened: The lungs expanded beautifully, and after dissecting several layers of tissue the operator thought, that the heart covered with blood clots lay before him, while in fact, it was only the pericardium. The whole appearance of the heart had been changed to such an extent by the bloody infiltration and suggillation. This unfortunate mistake was fatal to the patient; without it we would have found the wound of the heart more quickly and could have sutured it and possibly saved the patient. Finally after opening the pericardial cavity and removing the large amount of co-

agulated blood which filled it, the stab wound of the heart muscle was in plain sight, but the patient had already bled to death.

As you will see, the technic also of operations upon the heart and pericardium is modified by the use of the pneumatic cabinet, since the discussion about the best and least dangerous point of entrance to the heart is of no importance at the moment, when one no longer has to fear the opening of the pleural cavity. We have forerunners in this field of activity also; I recall Rehn's bold deed, Pagenstecher and others, but this field, like surgery of the lungs, has remained very sterile until now.

Finally, I can report a case of surgery of the thorax wall, in which I assisted Professor Mikulicz. It was a sarcoma of the thorax the size of an apple, surrounding the third rib and situated above the nipple. The tumor was resected together with a piece of rib the length of a finger. Again the lung expanded beautifully. It took some time to control the bleeding. The thorax wound was then closed by suturing the anterior costal and pectoral muscles with strong cat gut and by exact union of the skin. The whole operation was done without hurry and without the least disturbance: pulse and respiration of the patient continued good during the whole time. In spite of the fact, that because of the considerable loss of blood and our customary irrigation with normal salt solution some fluid had collected in the pleural cavity, so that I noticed a hydrohemothorax in the next days, in spite of this, the recovery was perfect, and the patient was discharged on the ninth day and soon afterwards sent to her Russian home. By microscopical examination I was able to determine a mixed celled sarcoma.

If I may be allowed to return once more to the subject of oesophagus operations, I would say that the cause of our meager results does not lie in the inefficacy of the cabinet, but rather in the technical difficulties, which under all circumstances go hand in hand with operations for carcinoma of the oesophagus. These difficulties are caused, first, by the location of the organ, second, by its anatomical condition and third, by the

imminent danger of an infection of the pleural cavity.

First: The operation is performed at a great depth, struggling with the constantly forward pressing lungs, which can be kept back only with much trouble by means of broad depressors or retractors. Care must be taken not to injure the vagus nerves. The aorta and its numerous branches lie dangerously near. If we have been fortunate enough to succeed in resecting the diseased piece of the oesophagus, we stand yet before the more difficult task of reuniting the latter. In the first place, the oesophagus is not at all elastic or movable, since it is just long enough to go the shortest way from the mouth to the stomach. Furthermore, it is tightly adherent to a broad support by means of strong connective tissue. Thus the suture naturally suffers a dangerous tension.

Regarding the frequently occurring carcinoma of the cardiac end, the difficulty can be eliminated by a technical maneuver, which Mikulicz first applied with success in his experiments upon the dog, and which he has transferred to the human body in his experiments upon the cadaver. The cardiac end of the stomach can be drawn directly through the oesophageal opening in the diaphragm, and in this way it can be united with the proximal segment of the oesophagus. Notwithstanding this fact, it is however difficult to secure a safe union, because it is here unfortunately not possible to cover the line of suture throughout with serous membrane, after the manner, which is employed so advantageously in intestinal suture because the oesophagus is only covered partially with pleural tissue, which moreover, is movable only to a slight extent. For this reason, it is scarcely to be expected that an oesophagus suture will ever be as safe as an intestinal one. That makes necessary the use of drainage, which in turn, threatens an infection of the pleural cavity. In order to prevent the formation of a pneumothorax because of the presence of drainage after the completion of the operation, we have constructed a contrivance out of glass and rubber, which makes an air-tight closure over the dressing, covering the thorax.

It does not seem to me that this report is entirely discouraging. It is possible, that since my departure there have been further improvements in Sauerbruch's work in Breslau. It is self-evident, that there must be many further improvements, especially in the technic of this operation. It is to be expected that further improvements will be made in the construction of the cabinet. My friend, Dr. Gaylord of Buffalo, New York, has written me, that he has just constructed a cabinet. It is quite possible, that he has already improved upon the original.

At this point, it is proper to refer to a recent modification of our method, which may possibly take the place of Sauerbruch's cabinet, as it seems to have the advantage of greater simplicity. In the beginning of my paper I touched upon the possibility of reaching the same end, that is to say, the physiological difference between bronchial and pleural pressure, by another route, namely, by producing an increased pressure within the bronchi. This is the so called "Überdruckverfahren."

The method was invented by Brauer and Petersen of Heidelberg, during the past year and following Sauerbruch's work. Many years before this, however, similar apparatuses had been employed. The French surgeons Tuffier and Hallion and also your countrymen, O'Dwyer and Matas, have made very interesting and valuable experiments in this direction. Their procedure consists essentially in intermittent inflation of the lungs by means of bellows, as you understand, in a kind of artificial respiration. An improvement was invented by Matas which consisted in the use of a graduated air pump. This older method has as yet not been applied practically to a great extent. Now, Brauer of Heidelberg developed a method, in which he made use of a little cabinet with continual positive air pressure. This cabinet contains approximately one-third of a cubic meter space, in which the air pressure exceeds the normal atmospheric pressure to a sufficient extent to keep the lungs expanded. The head of the animal is inserted into this cabinet through a diaphragm, the body remaining outside. The anaesthetist also introduces

his hands into the cabinet through rubber cuffs and carries out the anaesthesia with an appropriate apparatus. You see, the so-called *Uberdruckverfahren* is an inversion of Sauerbruch's method. Petersen has in this manner successfully operated upon the heart and lungs on a number of dogs. The simplicity and diminutive size of this apparatus undoubtedly has many advantages, but it seems to be, that the anaesthetist works at a serious disadvantage under the conditions described above. Sauerbruch himself considered this method, before it was developed in Heidelberg. He also made a number of experiments in this direction, but abandoned the method again, because it seemed to him, that there were many objections to its use, which I cannot discuss in this paper because of lack of time.

Although the results which we obtained so far, have been only moderately successful, it must be remembered, that they contained the earliest observations. There is no doubt, but that the opinion of Professor Mikulicz, which he expressed at the Congress in Berlin, is correct, when he stated, that we are entitled to the expectation of better and more satisfactory results. He hopes to be able to attack, aside from the above mentioned conditions, also injuries and defects of the diaphragm. He even suggests the possibility of interfering with certain valvular heart lesions, an American surgeon having already mentioned the incision of mitral stenosis. It would seem to me, that the method might be successful especially in the extraction of foreign bodies from the bronchi, for the treatment of diverticula of the oesophagus and more especially for the removal of foreign bodies, impacted in this organ. All of these operations would of course promise much better results than the carcinoma of the oesophagus.

SOMETHING ABOUT URETHRITIS.

BY HOWARD CRUTCHER, M. D., CHICAGO.

When one has come to understand the depths, to say nothing of the other dimen-

sions, of his ignorance, concerning some branch of medical science, it is perhaps a natural impulse to suppose that he is a member of a very large class. Concerning the subject of urethritis, whilst my own may not be an epidemic case, I hardly believe it to be sporadic, hence what I may have to say may appeal to some of you as having something of a personal application.

My early medical studies were begun in a country college town. My preceptor was one of those amiable men who do not believe in discouraging a medical student by over work; in fact, he generally assigned for my studies about a bone a week, and made no serious complaint if I failed to report with a recitation at the appointed time. I would, as a rule, memorize some of the salient points of some bone, walk to town, find my preceptor seated amongst a group of men discussing politics, recite to him what I had memorized, receive his commendation, and take my departure. He never questioned anything that I said, particularly about the sphenoid bone, and I soon became impressed with the notion that I was making rapid progress in anatomy. One day it was suggested that I would make even more rapid progress if I would pursue my anatomical studies with the aid of the bones of the skeleton. A doctor who lived in a nearby town loaned the desired bones. After that time I might have been seen walking to town, always carrying a bundle under my arm. It began to be whispered about that I was actually in possession of genuine human bones, which I made bold to carry around without fear either day or night. This led the ignorant whites and blacks to avoid my company. I was pointed out as a dangerous member of society, one not afraid of skulls and the like. This suspicion I observed and supposed it to be due to my recognized importance as one of the scientific spirits of the community. As time wore on I spent more and more time in the office of my preceptor. Having mastered anatomy, I longed for more fields to conquer. One day, by mere chance, I fell to reading a volume devoted to the Practice of Medicine, but it was so filled with ponder-

ous phrases and fine spun theories that I became discouraged.

I feared that all my imaginary anatomical attainments would count for nothing if I failed to become a master of therapeutics.

Amongst the grown-up members of our community the president of the college, the several professors, the local judge, the banker, and the members of the learned professions were commonly accounted to be the foremost citizens of the town. Amongst the younger set, however, the drug clerk was an easy first, with no possible second. He was surrounded by hundreds of drugs, he knew all the doctors and all the sick of the neighborhood, saw what was prescribed in all cases, remembered it all of course, and must of necessity be the leading man of practical medicine in the place. I sought a private conference with him and laid my troubles before him. I confided to him that I was something of a marvel in anatomy, but expressed a belief that I would always be a blockhead in therapeutics. He was delighted. He showed to me his file of treasured prescriptions, spoke as familiarly of deadly poisons as I spoke of the characteristics of the femur, and made such an impression upon my mind that I decided on the spot to adopt him as an additional preceptor. Thereafter I spent less time with the old doctor and more with the young clerk. I had once heard a very old man say that young men sometimes know more than old ones, and with two such glittering examples before my eyes as the young clerk and myself I did not doubt the profound wisdom of the observation. One day while drinking at this newly-found fountain of wisdom, the proprietor being absent, a countryman called for the purpose of selling some freshly dug roots and herbs. The clerk and I promptly took him in tow. The common roots were spread out at random in a large basket, but he drew from his pocket, with much ceremony, a carefully wrapped package, which he unfolded with provoking slowness. As the folds of the paper disappeared, exposing the precious roots to view, the man who had dug them assumed an air of profound mystery, looked about the cor-

ners of the room as if fearing the presence of some spy, lowered his voice, rolled his eyes a time or two, and solemnly declared that the precious stuff would cure consumption. My old preceptor had told me that consumption was not in his line. Here was something new; therapeutics at first hand. There was some controversy as to the price to be paid for this new world-beater. Matters seemed to be growing serious when the clerk and the countryman withdrew for a private conference. The clerk put to the other man what may justly be classed as a crucial question. It was answered affirmatively in the most positive terms. That settled it. The package was grabbed from its resting place and hurried away for safe keeping. I was soon let into the secret. This consumption cure, unlike some others, I may observe, was based upon common sense; it simply rounded up the disease and rushed it out of the body through the kidneys. Nothing simpler. On the way out of the body it gathered up all other diseases found in its wake and took them along with the consumption. The test question put by the clerk to the root-digger may be imagined. It related to a malady that I have since learned is very common in college towns as well as other places. Within a few minutes the clerk explained to me all about urethritis and simplified the treatment by stating that the new-found specific would cure it every time. Our fame and fortune were made, only a few non-essential details remaining to be adjusted. Two such progressive minds as ours would not long permit details to rest. I suggested that we compile a general work, for our personal use, on therapeutics. We searched the files and skimmed the cream of the medical wisdom therein found. One doctor in the town had one prescription for everything, quinine and simple syrup, another gave nearly everything for anything; both seemed to be equally successful. We began the preparation of our joint-work. Consumption and gonorrhoea, including allied diseases of the urinary tract, received the lion's share of attention. Having already one unfailing specific for gonorrhoea, the humor of spending days and

nights in the search for a score of other equally reliable specifics never once dawned upon us. The more specifics we found, the more our faith in them grew. The less a man knows, the less he knows it. Our work on therapeutics was nearing completion. About this time I made what was then a formidable journey, about fifty miles from home. A doctor learned that I was a medical student, and showed many kindly attentions to me. One day I ventured to confide to him that I was joint perpetrator of a prospective work, which I laid before him. He seemed deeply absorbed, as I suppose he was, for he read and read over again certain passages. He was too polite to laugh outright, but he begged me to leave the manuscript with him for a time, which I was glad to do. At last I asked his opinion of it. In firm but kindly tones he showed me what a numskull I was. He ran his eye down the long list of specific prescriptions for gonorrhoea and observed:

"Here you are wasting your time fooling with a lot of rubbish. Your consumption cure is a fraud; nothing will do consumption any good; they all die, every last one of them. As for your gonorrhoea compounds, you have wasted a lot of ink and paper. A little sulphate of zinc and morphine will always cure it in about three or four days, but you had better let such diseases alone. Turn them over to the other fellow, as they run away your good business."

Here was the frank opinion of a highly respected practitioner in whose judgment I had great faith. I had been taught by many medical men that diseases of the genito-urinary tract were things that no serious minded man ought to concern himself with. My present belief is that when I was a medical student, nearly twenty-five years ago, not one case of gonorrhoea out of five, in the person of a young man, was ever seen in the early stages by a physician. They were turned over to the drug clerks and to others. I recall distinctly the sharp tones of an old practitioner who advised a young man suffering acutely from gonorrhoeal cystitis to go to that "—specialist around the corner," referring to a young doctor

recently out of college who was glad to treat all comers and who was no more a specialist of the kind referred to than was the old doctor himself "a granny specialist," a term often applied to him by reason of his large obstetric practice. The old gentleman did not care to bother his brain with any such simple matter as gonorrhoeal inflammation of the bladder. His great mind preferred a normal labor in a multipara lasting about two hours, ending with the delivery of a "bouncing boy," and reflecting great glory upon the profession.

One day when I had expressed a sense of shame that our profession had allowed the study of urethritis and its sad train of complications to go so largely by default, I was asked if I made a specialty of this class of maladies. I replied, "No; no more than I am an 'osteopath' because I set a broken bone, or a hydropath because I advise a bath, or a Christian Scientist because I see certain good things in both Science and Christianity; but I believe it a moral outrage that the medical profession should allow a dangerous and far-reaching pathological condition to drift into the hands of charlatans to make merchandise of."

Thanks to the patient and laborious work of that torch-bearer, the pathologist, we have come to see something of the deadly ravages of urethritis, and have modified our treatment accordingly. We no longer sneer at it as a trivial ailment, to be treated by any first comer; we no longer regard it a matter of days, as much as some dreamers may say to the contrary, and we have ceased to dabble with a delicate mucous canal in the spirit in which a surgeon of the old days would whip off a leg. Urethritis in the male is a highly dangerous malady, often very prolonged under the wisest treatment, many times leaving ravages that inflict great sufferings, ultimately cutting short the days of the patient and perhaps inflicting marks upon his descendants that last for a lifetime.

My present purpose is less to advocate any special treatment than to protest against short-sighted and dangerous methods, which, in spite of all protest, are far too common in

practice. To speak of aborting gonorrhoea is about as sensible as to advocate the abortive treatment for a broken leg. Many if not most cases may be prevented absolutely by cleanliness promptly applied after exposure. When the disease has made itself known, it can not be aborted, any more than a gunshot wound can be aborted. As one expressed it, "Prevention and abortion are two very different things?"

As we are seldom or never called upon to prevent the disease, our field of usefulness lies along strictly curative lines. And this brings up a question to which I shall devote the remainder of this paper.

What is it that we are to cure? We are so accustomed to seeing the discharge, to hearing the patient complain of it, and to devising means for its relief that we are liable to forget that it is a result and not the cause of the disease. Patients may be pardoned for illusions of this sort, but surely the medical profession ought not to be so easily misled. In smallpox, an eruption; in gangrene, sloughing, and in gonorrhoea, a discharge. To suppress an eruption or drive back a discharge is to oppose the plain and sensible design of nature, and surely the disastrous results following such a course are sufficiently clear so far as gonorrhoea is concerned. Instead of suppressing the discharge, we ought to promote and encourage it by rational means until we are able to attack with safety the underlying cause. It is not safe to meddle with an inflamed urethral canal in the early stages, either with instruments or with chemicals. Both are to be condemned without reservation. Scar tissue is a monument to dead tissue, and in this delicate and sensitive canal a scar is commonly referred to as a stricture. The charlatans are fond of dark places, since their work will not bear inspection in the light. They delight to absorb as they call it, the fibrous dam across the urethra by means of the electric current. I wonder why they do not try their currents upon some of the shocking scars following burns upon the face! There is a sufficient reason: in the urethra it is possible to practice fraud and upon the face it is not.

To return to the discharge, the more it is encouraged the less trouble it becomes. The more the patient flushes his system with pure water, and the less he meddles with his acutely inflamed urethra, the sooner will he be free from the gonorrhoea. Two quarts of pure water, a quart of sweet milk, with lemonade between times, are advisable. There are some theoretic objections sometimes raised against lemonade, but we have learned that the human organism is not a chemical laboratory, and the lemonade is almost invariably welcome to the palate and soothing to the inflamed tissues. A few simple and well-tried internal remedies are of undoubted benefit in this stage. When the acute symptoms have subsided, it is then safe to apply local remedies. And one rule must always apply to this little canal: never apply here a solution that can not with absolute safety be applied to the conjunctiva of the eye. I had almost said the stomach, instead of the eye, and having said it I shall not retract it. The male urethra is one of the most delicate of human tissues, and whilst it can not enjoy the ministrations of angels it certainly ought to be spared the bungling of fools.

AN ATTEMPT TO USE THE ELECTRIC CONDUCTIVITY OF URINE FOR CLINICAL PURPOSES.*

BY G. KOLISCHER, M. D., AND L. E. SCHMIDT, M. D., CHICAGO.*

The rapid advance of renal surgery in late years put always increasing demands to the refinement of the diagnostic methods. In this way a new conception, the functional capacity of the kidneys was introduced into the surgical diagnosis. The old idea that this functional capacity could be measured by determining the amount of eliminated urea was pretty soon abandoned.

Richter and Casper have shown that it is necessary to determine the total amount of eliminated solids in order to draw conclusions as to the function of the kidneys. Koranyi utilized the variation of the freezing

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point in order to determine the molecular and osmotic concentration of the urine; comparing the thus gained results with the lowering of the freezing point of the blood.

Kuemmel used this latter method quite extensively in outlining indications and contra-indications and limitations of kidney surgery. Other authors brought certain stains into the circulation either per os or by hyperdermic injection, and tried to determine the functional capacity of the kidneys by watching the time that elapses before coloring of the urine appears, and by observing the intensity of this coloring.

Casper took a further step in another direction and tried to draw conclusions as to the integrity of the secreting epithelium of the kidney by the phloridzine test.

Turner and Loewenhardt introduced into the renal diagnostic methods the test of electric conductivity judging from the results thus gained upon the osmotic concentration of the urine and thereof upon the functional capacity of the kidneys.

All these methods have certain shortcomings. All the color tests although furnishing a certain amount of information by no means offer an exact sliding scale, the results of which could without further discrimination be applied to the determining of the functional capacity. Cryoscopy in recent years, lost considerably the enthusiasm with which it was first seized. In the first place it was based on the assumption that there is a uniform standard equally valid for all normal kidneys and that certain deviations from it characterize a kidney as pathologic and even determine the degree of the pathologic and functional change. This assumption proved to be erroneous. Changes of food, changes in the amount of fluid taken, exercise, influence the results of cryoscopy considerably; but even if individuals are placed under uniform conditions for some time previous to the examination, the reports from different authors will still vary. The simple test of the electric conductivity meets with the same objections.

We therefore tried to determine the func-

tional capacity of the kidneys from a new point of view.

We wanted to make the examination independent from a supposedly general uniform standard. We tried to make every kidney, so to say, a standard unto itself. We started from the idea that the vitality and normal and abnormal status of any tissue can best be tested by observing its reactions to certain interferences brought to bear upon it. Starting from the experience that certain stains brought into the circulation will appear at different times and with different intensity in the urine; we investigated whether or not the secreting efficiency of normal and abnormal kidneys might be influenced in a way peculiar and characteristic for normal and abnormal conditions of the secreting tissue.

If that be the case, the osmotic concentration of the urine voided before and after staining, certainly ought to show marked differences. The results of our investigations so far seem to bear out these theoretical speculations.

As the most sensitive test we resorted to the test of electric conductivity and as method of staining, we selected hypodermic injections of indigo carmine.

Without going into the minute recital of all the details, we just want to give the most marked points in this abstract.

Urine drawn at the same time separately from either normal kidney in an individual also otherwise perfectly healthy might show different electric conductivity.

After the stain is brought into the circulation and after the urine becomes colored, the urine of normal kidneys always shows a slight decrease of electric conductivity which depression however, will never exceed nine international Ohms.

In case urine simultaneously drawn from both normal kidneys shows different electric conductivity before staining the decrease of conductivity appearing after staining is exactly the same in either specimen.

Urine drawn from pathologic kidneys will always after staining show a decided increase

of electric conductivity. So far, we consider ourselves justified in stating:

Any increase after staining of electric conductivity beyond ten international Ohms is characteristic for impaired health of the kidney. If this increase stays inside the limits of twenty Ohms, this kidney still may be considered as safe in a surgical sense, that is, it can reasonably be expected to be of sufficient functional capacity to attend to the eliminating process after its mate was removed.

Any kidney whose urine after staining shows an increase of electric conductivity beyond twenty Ohms has to be considered as absolutely unsafe in a surgical sense.

We might add that if our method should prove to be reliable, that we succeeded in determining the fact that there are cases of one-sided nephritis.

Judging from experiments we are now working on, there seems to be a fair prospect that we will be able to determine by this method in advance whether a given individual will re-act as to his kidneys favorably or unfavorably to the administration of a general anesthetic.

THE DUNBAR ANTITOXIN METHOD OF TREATING HAY FEVER.*

BY OTTO J. STEIN, M. D., CHICAGO.

Last spring I exhibited before the Chicago Laryngological and Climatological Association some of the antitoxin serum and powder for hay fever, as suggested and prepared by Dunbar. At the same time, I showed a vial of the toxin of rye pollen that was kindly sent to me by Dr. Dunbar for experimental purposes.

The rye toxin, it is claimed by Dunbar, is particularly active as an agent in producing that variety of hay fever known as rose or June cold, but is inert in the autumnal variety. It was therefore necessary, in my experimental work with the rye toxin, to limit myself to the early form of the catarrh. These cases are not so frequent as the commoner autumnal variety, hence material for

these experiments I found to be scarce. All the experiments were carried on with the assistance of control subjects, and the same amount of toxin solution was used in each case.

Experimental case I. O. S., physician, a sufferer from an early form of hay fever for several years. Attacks commence about the middle of May and last several weeks. Has a ridge on the right side of nasal septum. March 18, 1904, instilled one drop of a 1 to 100,000 solution of the toxin of rye pollen on the conjunctival membrane of left eye. Five minutes later a second drop was instilled into the right eye. After ten minutes a drop of the 1 to 10,000 solution was instilled into the left eye, followed in five minutes by a second drop in the right eye. The first symptoms of a reaction were now noticed by the susceptible subject, but not by the control subject. Itching along the margins of the lower eyelids was associated with dilatation of the blood vessels of this region. A mild degree of lacrymation immediately followed. After a period of about two minutes, a tickling sensation within the left nostril became apparent, which continued to become quite prominent, so as to provoke two or three sharp sneezes. A slight hypersecretion of the nasal membrane followed. In the control subject, the solution for instillation was increased in strength to 1 to 1,000, but it produced no reaction. With the susceptible subject, the antitoxin serum was now employed, first by instilling a drop on the lower lid of each eye, and later by the introduction of two drops into each nostril. It was six hours before all of the symptoms had disappeared.

Experimental Case II. B. C., student, has had spring colds for several years. The spring of every year he has symptoms of a variety of hay fever that persists more or less constantly for three or four weeks, then suddenly disappears. Intranasal structures apparently normal. March 20th, 1904, instilled one drop of the solution of the toxin, 1 to 100,000, into the right, and one drop into the left eye. Fifteen minutes following there was no reaction. Then one drop of the 1 to 10,000 solution was dropped into each

*Read before the Chicago Medical Society, February 22'05.

nostril. Within a few seconds sneezing followed. The eyes suffused with tears, the nostrils began secreting freely, and the characteristic itching and stuffy feeling within the nose was complained of. As soon as the symptoms were well established, a drop of the antitoxic serum was instilled first into each eye and then into each nostril. The symptoms seemed to abate within the following ten minutes. The subject readily noted the improvement and within an hour all the symptoms had disappeared. As in case I, a control subject was used, who showed no reaction even to the 1 to 1,000 strength solution of the toxin.

Experimental Case III. A. F. M., student and teacher. Has attacks of hay fever both in the spring and fall. The spring attacks commence in May and disappear and recur for a period of six weeks. Has hypertrophic rhinitis with a mild degree of septal deflection. March 20th, 1904, instilled a drop of the 1 to 100,000 solution of toxin into the right eye, followed immediately with a second drop in the left eye. After five minutes this was repeated with the same strength solution. No reaction. One drop of the 1 to 10,000 solution was then instilled into each eye, which very shortly produced symptoms of irritation, such as a stinging and itching, accompanied by lacrymation and congestion of the mucous membrane. At the same time, the nostrils began to run profusely. At once the antitoxic serum was dropped into the eyes, which was followed by an immediate subsidence of all symptoms, with no recurrence. The control subject manifested no symptoms with the same strength solutions.

Dunbar, as the result of his extensive experiments, has satisfied himself that the specific causal factor in the production of hay fever is a toxin that is found in the pollen of certain grasses, cereals and plants. But to be effective the toxin must be exhibited in a predisposed individual. What constitutes this peculiar predisposition still remains a mystery. Many theories have been presented in explanation, but none of them thus far have been sufficiently demonstrated to conclusively prove their position. Hyper-sensitive areas along the upper respiratory

tract, changes in the chemical composition of the secretions of this tract, and a neurotic disposition, have all been thought to be the predisposing element. But judging from experiments neither time of year or environment of the individual influence the retardation of the manifested symptoms when the toxin is brought in contact with the membranes of the susceptible patient.

Reports of experiments similar to the ones just recited have already been published by Dunbar, Semon and Mayer, all of which seem to bear out the aforementioned statements.

Having definitely settled in his mind the question of specific cause, Dunbar was ready to study the possibilities of obtaining a remedy for this disease. By following along similar lines carried out in the development of antibodies in other diseases, he was able to obtain a serum that would neutralize the toxin in hay fever. This preparation is on the market now, both in serum and powder form. The serum is dropped from a pipette into the eyes or nostrils, or both, at the first sign of any hay fever symptoms, and repeated as often as desired. The powder may be used in place of the serum by insufflation with a small powder blower, or it may simply be snuffed up the nostrils.

To obtain the greatest degree of immunity it has been my experience that the remedy must be applied before the onset of an attack. At the very first sign, or just prior to the time when the attack is expected, and this time is fairly well known by those who suffer from this disorder, resort should be had to the medicine. When the disorder is once fully established, I have learned from my patients that they do not obtain the relief expected. It therefore was my invariable custom to emphasize to my patients the necessity of using the remedy at the very onset of the disease. Regarding the remedy, therefore, more as a prophylactic one, I have found that in all but three of my cases it proved efficient. When used during the height of an attack, it usually modifies the severity of the same, but never entirely relieving the patient. The experience of some observers has been that even a well-developed

attack may be relieved at once and entirely. But such has not been my experience. In one case the symptoms were easily prevented from developing if the remedy was used in time, but by carelessness of the patient, she would find herself in the throes of a distressing attack, which was mitigated, but not entirely dissipated by the use of the remedy. One case obtained no relief whatsoever. The first time he used it was during a very severe attack, upon which the remedy made not the slightest impression. On several other occasions during the hay fever he made use of the remedy, but to no purpose. In another case the severity of the disorder was very much lessened. In fact the patient was scarcely disturbed by the slight symptoms she had. But a peculiar feature in this case was that she could not use the serum in her eyes without producing considerable redness and swelling of the conjunctiva. It was thought at first that this might be due to the particular lot of serum used, but it occurred with the second and even the third bottle. Possibly the small amount of phenol used in preservation of the serum was the responsible agent.

Speaking of preservatives, reminds me to say that I have noticed what an unstable preparation the serum is. Patients who consider the cost complain of this instability. For that purpose, as well as for greater convenience, many of my cases have preferred the use of the powder form of the preparation. In a few cases the use of the powder seemed to precipitate an attack, while the serum immediately corrected this evil. The small percentage of phenol, one-fourth of one per cent, used in the serum, does not suffice to preserve the preparation, and the bottle is scarcely more than opened before it becomes contaminated; and this even after observing all the precautions possible.

In presenting the report of the following 26 cases treated by the Dunbar method, I do so solely for the purpose of presenting my personal experience with this new remedy. The remedy has already been extensively advertised, so that there is no doubt but what many cases have been treated within

the past hay fever year, and it will be of great interest to the profession as well as to the layman who suffers from this very distressing affliction, to learn of the experiences of these cases with the use of this remedy.

Case I. A physician, age 38, a sufferer from an early form of hay fever for five years, usually commencing in May or June, and lasting several weeks. His attack this year commenced as a result of a railroad trip to Atlantic City to attend the session of the American Medical Association. The attack was severe, but only of two days duration, when without any treatment it disappeared. On his return trip an attack was precipitated as soon as the train was well under way, and throughout the entire trip, and after his arrival in Chicago, for a period of several days following, he suffered acutely. Immediately upon his arrival the serum antitoxin was employed by dropping two drops into both of the nostrils. No amelioration of the symptoms followed. This was repeated on several occasions, but with no different result. Finally, with the subsidence of this attack and with symptoms of a fresh one, the serum as well as the powder was employed, but it failed entirely to prevent or even lessen the severity of the attack, which proved to be a severe and lasting one.

Case II. Miss H. G. S., 23 years, complains of hay fever for twelve years. Attacks commence about the 12th of August and continue two months. Lower turbinals hypertrophied, especially the posterior ends. In May, 1903, removed by means of a snare the posterior enlargements, and electrocauterized the body of the lower turbinals. That season (1903) her hay fever symptoms showed great improvement, although light attacks were more or less present. The beginning of August this year she was supplied with the liquid and powder antitoxin. The first of October she reports that although she was not absolutely free from her trouble, she was scarcely annoyed on account of the lightness of the attack. Her experience with the remedy led her to prefer the powder, because the serum was responsible for a degree of irritation that caused a congestion

and swelling of the mucous membrane of the eyes following each instillation.

Case III. Mrs. N. H. S., New York City, gives a history of having hay fever for the past eight years. The attacks commence precisely on the tenth day of July and continue until the last of September. Riding on the railway invariably precipitates a severe attack of several days' duration. The patient was visiting Chicago. The day of her departure, July 15th, she applied to me for some preventative. I supplied her with both the powder and liquid antitoxin. July 30th her husband writes from New York to the physician who referred the case: "Dr. Stein gave Mabel a liquid medicine for her hay fever that was very good—some extract of horse—and she has not been troubled up to this evening, when she had a severe attack. I got the serum, intending to apply it, but it now has a fierce odor and I am afraid to use it, fearing it has spoiled. Won't you kindly mail to me from Dr. Stein a fresh bottle."

August 11th the patient herself writes from Jersey City: "I have found the medicine of the greatest benefit in checking a threatened attack. This climate seems to be especially conducive to hay fever, and I usually suffer here more than any place I have ever been."

Case IV. Master L. B., 10 years, has been a sufferer of asthmatic attacks for the last four years. He is very susceptible to a "cold," and several times during the year has hay fever symptoms. Intumescent turbinals and small amount of adenoid tissue in the vault of pharynx. In May 1903, I removed the adenoids and electro-cauterized the turbinals. As a result there was great improvement in symptoms, but still not entire relief until this spring, when the hay fever antitoxin was employed, causing complete immunity from any attack if used in time.

Case V. Miss Helen S., 20 years, claims to have had hay fever most all of her life. Regularly on the 13th of August the attacks commence and last until the late fall. On the 9th of August supplied her with the antitoxin. No nasal examination made. October 15th she reports that the symptoms

of lachrymation, congestion and irritation of the eyes, as well as sneezing and nasal discharge were all checked by the use of the remedy, but that a stuffiness of the nostrils persisted, causing at times difficulty in breathing.

Case VI. Mr. A. P. T., 18 years old, Deadwood, South Dakota, has had hay fever symptoms every summer. Examination of the nose and throat shows nothing abnormal. In a letter asking for another supply of the antitoxin, the patient writes: "The hay fever medicine has done me a great deal of good, as I have stopped two attacks with it."

Case VII. Charles C., of Lead, South Dakota, has had hay fever every fall since 1894. Is an acute sufferer, so that he has to confine himself in a dark room whenever the attacks become very severe. The antitoxin, he reports, has prevented him having any trouble this season.

Case VIII. B. B. of Saint Paul, Minn., a chronic sufferer of hay fever. A quantity of the antitoxin was furnished him in July, and he reports immunity to all symptoms of the malady this season.

Cases IX and X are B. C. and A. F. M., the medical students used in the experimental work with the rye toxin. Both of these gentlemen were provided with the remedy, and in each case the usual symptoms experienced by them every spring were prevented, and they passed through a comfortable summer.

Case XI. Mrs. E. E., age 31, had pneumonia eight years ago, and every fall since has been a sufferer of hay fever symptoms. Examination of nostrils reveals nothing more than an intumescent rhinitis. The lower turbinals were electro-cauterized during the summer. The antitoxin was used at the time she experienced her first hay fever symptoms, and by repeated use of the remedy, the patient kept herself free from any suffering.

Case XII. Mrs. K. S., age 51, has suffered for years from hay fever symptoms. Migrates every fall to the north of Michigan or the mountains of Montana, where she obtained immunity from her trouble. I induced her to remain in Chicago this year,

in order to ascertain the effects of the antitoxin in her case. Aside from one slight attack in September, she remained free from the disease.

Case XIII. Mr. R., age 35, a sufferer of hay fever with hay asthma. Attacks commence about the middle of August and continue with scarcely any interruption until the beginning of fall. In this case the antitoxin not only relieved the hay fever symptoms, but also the asthmatic symptoms, provided the remedy was used constantly and at the beginning of the day, before the patient had time to go out of doors.

Case XIV. Mr. W. K. K. S., first seen by me seven years ago. At that time he had been subject to hay fever symptoms for several years, which commenced usually the middle of August. A large bony ridge projecting from the right nasal septum was removed when I first saw him, lessening the severity of his attacks to a considerable degree; but he would have symptoms of the disease at irregular periods. Some years it was very light indeed, and again it was more troublesome, and one season he had no symptoms whatsoever. With the first suspicion of trouble this year, I had him use the antitoxin, and he remained free of all signs of the disorder.

Of the following twelve cases, five were seen in dispensary practice, and seven were cases never seen by me, but who used the remedy at the suggestion of other patients. Of the first five, Case XV, XVI and XVII had the autumn variety of hay fever, with no complications. All were relieved by the use of the remedy as long as they persisted in its use in time. Case XVIII and XIX were complicated with asthmatic attacks. Both of these cases claim to have been greatly benefitted and relieved by the use of the remedy. But on the whole the employment of this remedy in dispensary practice, thus far, has proven unsatisfactory on account of the expense. Of the seven other cases, I have no definite data, excepting the verbal report of the patients who recommended the use of the remedy. The cases were apparently all of the late variety of hay fever,

and all of them, with the exception of two, as far as I can learn, seem to have been benefitted.

The following case, Case XXVI is unique. Miss — age 25 years, domestic. This patient applied to me for treatment several years ago. She said that whenever she worked in flour, as in baking, she immediately had an attack of hay fever, and it would often persist for several days. On this account she found it necessary to give up working as a cook, much to her regret, because she was considered first class in her work and earned good wages. After considerable trouble, I ascertained the whereabouts of my patient this summer and learned that she was still afflicted with her old complaint and particularly so whenever she was around where flour was. I induced her to try the effects of the antitoxin by immunizing herself with a few drops of the remedy introduced into the nostrils, and then subjecting herself to the inhalation of flour dust. At each exposure she remained free of any of the symptoms that she formerly experienced when similarly exposed.

100 State St.

TRICUSPID OBSTRUCTION. REPORT OF A CASE ASSOCIATED WITH MITRAL AND AORTIC LESIONS.*

BY JOSEPH M. PATTON, M. D., CHICAGO.

Tricuspid obstruction is characterized by all authorities as one of the rarest of valvular lesions. While it is not of so rare occurrence as some have supposed, it is yet of such infrequency as to afford ample apology for the presentation of the report of the case to be described.

The recognition of obstructive conditions of the right auriculo-ventricular opening is not a matter of recent times. Morgagni described a case of this nature associated with mitral disease in 1763 and Corvisart another of the same association in 1806. Later, this

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lesion was described by Horn, Betin, Boyer, Bouillaud and others.

Frequency. The infrequency of tricuspid obstruction can best be appreciated by reference to the experience of individual observers. Walsh in his extended experience appears to have met with but one instance in which this lesion was suspected, but in the absence of post mortem examination, not proven. He therefore characterized tricuspid obstruction as "exceedingly rare." Strümpell regarded it as "so rare as to have no practical significance." Ashton reported no instance in 1024 clinical diagnoses. Skoda never saw a case in a living subject. The records of St. Mary's Hospital, London, show no instance from 1851 to 1870. Duroziez reported ten cases in 1860, Hayden, three of his own and a number of others in 1875. Leudet, in 1888, collected 117 cases including those of the before mentioned observers. 114 of these were verified by post mortem examination. Herrick, in 1897, collected 40 cases since Leudet's publication. Three of these were his own. Gibson reports two cases with autopsy in his work on diseases of the heart, and one case is likewise reported by Babcock.

Etiology. Sex presents a peculiar relationship to the occurrence of tricuspid obstruction because of the remarkable relative frequency of the lesion in the female. Fenwick in his analysis of 46 cases placed the proportion at 41.5. In 108 of Leudet's series in which the sex was mentioned 86 were females and 22 were males. In Herrick's series the sex was noted in 38, and 28 of these were females and 10 were males. In 146 verified cases in which the sex is given, the proportion is 3.5:1.

Age is of interest chiefly in affording effective argument against the etiological views of Peacock and Rosenstein, who believed the lesion congenital in the great majority of instances, a view which is not consistent with the fact that the third decade of life shows the greatest number of instances—50; the fourth decade comes next with 34, and the fifth follows with 26.

Flint believed the acquired form to be very rare, while Leudet, Fenwick, and Bau-

mel regarded rheumatism as the usual cause. Gibson states, "that in the large proportion of cases the affection undeniably takes its origin after birth." Moreover the congenital form is generally associated with stenosis of the pulmonary artery, defects of the septum, patent foramen ovale or ductus Botalli, and clinically with marked cyanosis, clubbed fingers, and early death.

Rheumatism and chorea play the usual prominent part in the production of tricuspid obstruction, as shown by the 154 cases already mentioned in which 51 were rheumatic 4 chronic, 28 had no history of rheumatism, while 69 were without history of etiological interest.

Gibson believes that tricuspid obstruction may be caused by other acute diseases than rheumatism, and that chronic valvulitis from over exertion may also cause it.

Morbid Anatomy. The local anatomical changes do not differ essentially from those occurring about the left auriculo-ventricular opening. A more or less funnel-shaped adhesion of the valves is a common condition. The chordae tendinae are usually thickened and shortened, and the papillary muscles are retracted. Granulations, vegetations, fibrinous contraction, thickening and rigidity may be the principal valvular changes. There may be considerable deposits of inorganic salts in the tissue of the ring and the base of the valves. Those conditions described by Duroziez in which the valves were so fused as to scarcely admit the tip of one finger are unusual at the tricuspid orifice.

The orifice itself may be oval or circular, and may admit the tips of 1, 2 or 3 fingers. The ring may be cartilaginous or almost of bony consistence, as in the case to be described. The upper surface may be almost or quite smooth, while at the attachment of the valves it may be very rough. Contraction of the ring so as to admit but one finger tip is, as pointed out by Bamberger, quite rare. The general character of these changes has been well described by Chauffard as follows: "The result of an endocarditis that is slow and silent, generalized rather than profound, very slightly vegetative, but rather

adhesive and plastic, and that tends to unite the diseased valves by their borders."

The interpretation of the secondary effects upon the heart of tricuspid obstruction has, in practically all recorded cases, been modified by those effects due to the associated lesions, and it is practically impossible to separate these in the study of individual cases inasmuch as mitral lesions, especially obstructive ones, may produce almost identical effects upon the right ventricle and auricle as those resulting from tricuspid lesions. Theoretically there should be a greater or less degree of hypertrophy and dilation of the right auricle with only moderate changes in the ventricle. That the extensive changes in the ventricle shown in many cases are due to the associated lesions is shown by the state of ventricle in our own case where the mitral changes though marked really constituted but a moderate obstruction to the blood current. We find, therefore, only a moderate hypertrophy and dilatation of the right ventricle and a considerable change in the right auricle, at least an alteration not in proportion to that in the right ventricle.

The associated lesions are so constant as to be almost part of the pathology of tricuspid obstruction. A summary of the 154 cases already mentioned shows the presence of associated lesions as follows:

Obstruction, tricuspid alone	12
Obstruction, tricuspid and pulmonary....	3
Obstruction, tricuspid and mitral	96
Obstruction, tricuspid pulmonary and mitral	2
Obstruction, tricuspid pulmonary, mitral and aortic	1
Obstruction, tricuspid mitral and aortic..	39
Obstruction, tricuspid and aortic	1

The principal feature of these associations is the frequency of mitral involvement, that orifice being affected in 138 of the 154 cases. This series shows one instance of combined and tricuspid and aortic lesions without mitral involvement, which recalls the fact that Ashton had, before the publication of this series, called attention to the fact that no such association had been reported.

Symptoms and Diagnosis. In consideration of the associated lesions of tricuspid ob-

struction the symptoms of the latter must be regarded as equivocal and the diagnosis difficult. It is evident that enlargement of the right ventricle, if such could be determined, can have no bearing on the diagnosis in view of its occurrence from mitral disease and the constant association of the latter with tricuspid obstruction. On the other hand enlargement of the right auricle with more or less venous stasis may be regarded as good evidence, especially when associated with a presystolic murmur which can be differentiated from a mitral presystolic murmur.

Regarding this murmur, it was considered by Hope as rare, never recognized by Walshe, regarded as not proven by Potain, looked upon as largely theoretical by Da Costa and Leube, and as entirely so by Sieveking. On the other hand ante-mortem diagnoses have been made by Hayden, Grawitz, Shattuck, Gibson and others, and these diagnoses have been based largely on the presence of a murmur. Grawitz thinks the murmur diagnostic when heard clearest over the cartilages of the right fifth and sixth ribs. Hayden in two instances based his diagnosis on the fact that "the murmur of mitral constriction is always heard at the apex of the heart, and, in the great majority of the cases, is strictly limited to the area of the mitral opening. In this case a murmur of the same rhythm was audible to the left of the sternum. Between these two points there was a portion of the chest over which no murmur was distinctly audible. Balfour details an erroneous diagnosis due to his unwillingness to admit that a presystolic murmur propagated much farther to the right than usual could be due to tricuspid disease. Gibson states that the characteristic murmur is presystolic or diastolic, is heard best at the junction of the fifth or sixth ribs with the left side of the sternum, and that the sound may begin with the second heart sound and fill in the entire interval with some presystolic reinforcement.

In the event of a murmur presenting the characteristics above mentioned it undoubtedly would indicate tricuspid obstruction, but considering that the murmur may be absent, that there is no reason to object to the possibility of its being variable or evanescent

as are many mitral presystolic murmurs, and that in many instances the associated mitral murmurs may be so loud and of such extensive transmission that it is impossible to outline the tricuspid sound if such be present. The conclusion is inevitable that in those instances where a verified diagnosis was based upon the characteristic murmur, the conditions were exceptionable and the diagnosis fortunate.

A characteristic tricuspid presystolic thrill at the left edge of the sternum that can be differentiated from a mitral thrill has been described, but this must be considered as exceptional.

Dyspnoea, while it may be present, is not so prominent a symptom as in some other heart lesions. Foster has pointed out that the symptoms of stasis are to be observed in the systematic rather than in the pulmonary veins. Great susceptibility to cold, a tendency to cyanosis, possibly venous pulsation are shown. McKenzie called attention to a pulsation in the liver occurring in advance of the ventricular systole and due to the blood being driven in both directions by the hypertrophied right auricle.

Other effects of tricuspid obstruction are common to other heart lesions and need not be detailed here.

Prognosis. In view of the constancy of associated lesions it is evident that the prognosis of tricuspid obstruction can only be approximated as affected by such lesions. Indeed the lesion of the right side may have no special bearing on the prognosis as was the case with our own patient. Since we have no means of knowing the size of the tricuspid opening the rules formulated by Durozicz by which the prognosis is based on the size of the orifice can have no clinical application.

Report of a Case. The patient was under the care of Dr. C. B. King, who has furnished the following history:

Patient, M. H., aged 24 years; father died when she was two years of age. Mother died at her birth. No brothers or sisters. Married at age of fifteen years. Never pregnant.

First saw patient in spring of 1900. At that time she was suffering from incompet-

ency, exhibiting some oedema of feet and limbs, lips and fingers purple, shortness of breath, and pain in precordial region radiating into both arms. Heart was greatly enlarged, apex seventh interspace three inches outside nipple line, right ventricle 1 inch to right of sternum. There was a double murmur at both aortic and mitral openings. The first aortic sound was so loud and rough it covered the whole of the front of the chest. She responded quickly to strychnine and digitalis, the oedema of feet and limbs disappeared, during the following summer she got along very well, doing some house work. The following November she again suffered lack of compensation, oedema of feet, limbs and lungs, severe pain radiating to fingers of both hands. Ventricles dilated, left reaching to mid-axillary line, unable to lie down, eat or sleep, urine very scant and loaded with albumen and casts. Ordinary dosage of strychnine and digitalis produced no reaction, dosage increased at this time to digitalis 17 drops every 2 hours, strychnine gr. 1-30 every two hours, for three days. At this time Dr. J. M. Patton saw her in consultation. Digitalis had produced nausea by this time, and a change was made to digitalin, Merck's Pure, gr. 1-16 every three hours was given. In a few days there was a gradual response. Kidneys gradually improved, heart became competent, digitalis and strychnine reduced to 1-30 gr. of each 3 times daily. The following March she was able to leave the house and appeared at Dr. Patton's clinic, since then during the warm weather she got along very well unless she became negligent with the strychnine and digitalis. At times she would go several weeks without medicine. During cold weather she had more trouble. In September, 1903, she spent the month in the woods of Wisconsin, and seemed to improve a great deal. During the winter of 1903 and 1904 she had two or three slight attacks of incompetency, but responded quickly to full dosage of strychnine and digitalis. In June of 1904, she suffered a severe attack of incompetency and entered St. Luke's Hospital, was there for about six weeks. From there she went to Grove House, Evanston, remaining there until about the

middle of December, 1904. While there she had no medicine except the supply that was given her on leaving St. Luke's, and which was soon exhausted. I saw her again on December 23d, when she was suffering from all symptoms of incompetency. At this time she did not respond to the large doses of strychnine and digitalis. December 27, she entered Mary Thompson Hospital and died there December 29.

Although the patient had recognized her physical limitations from childhood, she gave no definite history of rheumatism."

I first saw the patient in November, 1900. Inspection showed forcible, heart impulse which moved the whole of the antero-lateral portion of the left side of the chest wall. There was some systolic pulsation at the second and third interspaces at the left of the sternum. Cyanosis was very slight. Dyspnoea was marked.

Palpation determined the apex impulse to be approximately in the seventh interspace in the anterior axillary line, the impulse being so diffuse that accuracy in location was impossible. The character of the impulse was distinctive of extensive dilatation of the left ventricle. A mitral presystolic thrill was felt midway between the mammillary and anterior axillary lines. It did not extend to the right of the mammillary line. A systolic thrill was felt at the area of pulsation before mentioned. There was no thrill along the

of cardiac dullness at the level of the fourth rib to be one and one-half inches to the left of the mammillary line on the left, and one-half inch to the right of the right sternal border on the right.

Auscultation determined double aortic and mitral murmurs. The aortic systolic murmur was usually loud and rough, and was transmitted over almost the entire front of the chest, being particularly pronounced from the second to the fifth ribs along the right parasternal line. The other murmurs had the usual characteristics, their points of greatest intensity being modified in accordance with the change in position of the heart.

The diagnosis was in accordance with these findings. Moderate dilatation of the right auricle and slight tricuspid regurgitation being recognized. The possibility of a tricuspid lesion was considered, but nothing definite was recognized.



FIG. I—Tricuspid Opening—Auricular View.



FIG. II—Aortic Opening—Ventricular View.

left edge of the sternum. Jugular and hepatic pulsation were absent.

Percussion determined the lateral limits

The autopsy, at which I was present, was made by Dr. King, 14 hours after death. There was considerable fluid in the pleural

cavities, and a moderate quantity in the pericardial sac. No evidence of pericarditis. The heart weighed 24 ounces (normal for women, 10 to 12 ounces). It showed extensive hypertrophic dilatation of the left ven-

one-eighth in height. The whole ring is calcareous and of almost bony hardness.

The mitral opening is oval in shape and measures 2 cent. by $\frac{1}{2}$ cent. (normal for women 1.2 inch). The upper surface of the

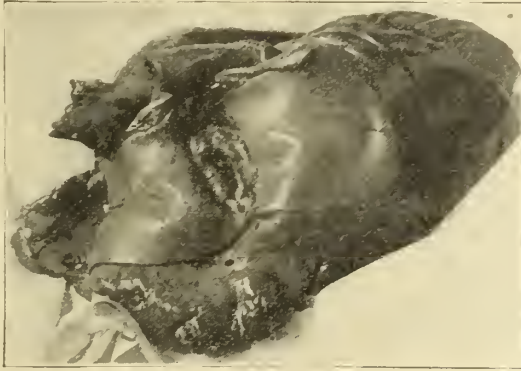


FIG. III—Aortic Opening—Arterial View.

tricle, moderate of the right ventricle, marked dilatation of the left auricle, and considerable dilatation of the right auricle.

The aortic opening is irregularly oval in shape and measure $11\frac{1}{2}$ by 5 cmt. (average for women .9 inch). The upper surface of the ring presents an irregular, hard, rough

ring is hard and smooth, the inner surface rough. The valves are thickened, rigid, with rough thick edges which form an almost continuous ring.

The tricuspid opening is almost round and measures $11\frac{1}{2}$ by .7 cent. (normal for women 1.5 inch). The upper and inner surfaces of



FIG. IV—Mitral Opening—Ventricular View.

ridge without evidence of valvular structures. The inner surface is sharp and rough, while the lower is rough, irregular and presents near the edge of the opening a calcareous vegetation a quarter of an inch long by about

the ring are rough, irregular and hard. The valves are thick, retracted and partly adherent at their bases.

The cavity of the left ventricle measure 5 inches from base of valve cusp to apex of

cavity (average for women, 3 inch.) The wall measures over 1 inch in thickness near the base of the ventricle (normal, $\frac{1}{2}$ inch), and $\frac{1}{2}$ inch at thinnest part of apex (normal, $\frac{1}{4}$ inch.)

The left auricle is much dilated and its walls are $\frac{1}{8}$ inch thick.

The cavity of the right ventricle measures $3\frac{1}{2}$ inches (normal for women, 3-16 inch), its wall is $\frac{1}{2}$ inch thick.

The right auricle is somewhat dilated and its wall is 1-12 inch thick.

The physical changes in the heart in this case explain and are in accord with the clinical symptoms, which were those of aortic and mitral disease, and not at all indicative of tricuspid lesion. The absence of any hypertrophy of the right auricle shows that the tricuspid lesion had no such effect on the auricle as had the mitral lesion on the left auricle. While the tricuspid lesion is of considerable pathological interest, it had little bearing on either the clinical history and symptoms or on the physical changes in the heart. In these respects the case corroborates the majority of cases previously recorded, and illustrates the fact that tricuspid lesions have, as a rule, less clinical importance than other valvular lesions, and especially than those with which they are associated.

Discussion on the Paper of Dr. Patton.

Dr. C. B. King: I do not know that I can add anything to what has already been given in the clinical history of this interesting case. I wish to call particular attention to the lack of any valve in that specimen. There is merely a hard, cartilaginous and some calcareous remnant.

I might speak further of the clinical history. The patient was rather under-sized for her age; she was bright and intelligent, and during all the time I knew her, I was unable to elicit a history of rheumatism. She would tell me every time I would ask her about it that from the time she was quite a small child she noticed she was not able to run and play with other children; she would get short of breath and would have to sit down. It would seem to me that there must have been a rheumatic affection, but the patient was so young that she remembers nothing about it.

Another point which might be mentioned is the enormous doses of heart stimulant required in order to have any effect whatever upon the heart. As was mentioned in the clinical history, when she was very ill digitalis was run up to 17 drops every two hours, and continued for a period of three days.

The roughening at the aortic valve, with even

bony projection into the valvular opening, produced a very rough sound and a thrill that could be felt through the patient's clothing. It was not necessary to palpate over the heart, as one could feel this thrill any place on the chest.

Dr. Patton (closing the discussion): I have very little to say, Mr. President, other than to answer the question asked by Dr. Eisenstaedt. As was stated in the paper, the young woman's parents could furnish no information, as her mother died during her (the patient's) birth; while her father died three years later of we know not what. There was nothing in the family history we could determine that had any bearing on the case. Patient, however, had an endocarditis probably primarily of an infectious nature, but originating at what time we were unable to discover.

In regard to the remark of Dr. King relative to large doses of digitalis, I would simply say that I consider those doses not excessive for such a case. We must remember that this woman was suffering from a well-developed aortic lesion. The other lesions clinically were of little significance. The changes in the heart from which she suffered and from which she died were wrought by the affection at the aortic opening. The condition in the right ventricle shows that the mitral valvulitis had little effect upon the clinical history, and that the tricuspid valvulitis had no effect on the clinical cause of the disease. Therefore, we had to deal with an aortic lesion of which regurgitation was the chief factor. She had one of the most pronounced systolic aortic murmurs I ever heard, but it was due to the incidental conditions. It had little connection with the changes in the ventricle wrought by the extensive regurgitation.

With reference, again, to large doses of digitalis, I believe the majority of clinicians advocate the use of digitalis in good sized doses for failing heart in the presence of aortic regurgitation. Balfour was one of the first of the old school to adopt that view. He has been followed by practically all modern clinicians. The salient point is, that if we want to help a heart with extensive aortic regurgitation as much as we expect to help one with mitral regurgitation, we have got to administer large doses of digitalis to get the effect—at any rate doses about twice as large as would be employed for the later condition, and the lesson to be derived is, that if we do this, providing we guard the blood pressure properly, we will get relatively as good a result from digitalis as we would in a case of mitral lesion. We do not expect to get absolutely as good a result in aortic regurgitation as in mitral regurgitation, because we have progressive dilatation of the ventricle under all circumstances. I give as much as 1-8 gr. (German pure) of digitalin to patients with aortic lesions and get good results. It is given every three or four times daily. One very seldom gets any results from anything less than 1-10 gr. It is a waste of time to depend upon doses of 1-100 or 1-60 gr.

GASTROENTEROSTOMY.

BY ALEXANDER HUGH FERGUSON, M. D.Professor of Clinical Surgery, University of Illinois,
Surgeon-in-Chief, Chicago Hospital, etc.

In this short paper, it is the intention to appropriate from the work of other surgeons those means and methods that appeal to my surgical sense that are directed to obtain the best results in gastroenterostomy.

The ante or retrocolic operation as it is performed today is the product of many minds and it has taken several years to explain the various complications as they have arisen, and many ingenious efforts have been made to counteract them.

Incision. Open the abdomen in midline of the epigastric region the distance of about four inches; should more room be required to manipulate the pylorus, duodenum, gall-bladder and ducts, on the one hand or the stomach and jejunum on the other, swerve the incision at the upper angle to the right or left rectus muscle, cutting through its sheath if necessary to meet the requirements of the case.

Exploration. Examine by manipulation and sight, all structures in the epigastric and right and left hypochondriac regions, taking note of the location and condition of the stomach and its two openings—the cardiac and pyloric; of the gall bladder bile ducts, duodenum, jejunum, pancreas and lymphatic glands. Should there be clinical evidence, in the history, or examination of the case, to arouse suspicion of disturbance or disease of other intra-abdominal contents, then pass the hand and forearm and thoroughly explore the abdominal cavity before proceeding to operate upon the stomach. This may in complicated cases reveal some condition demanding more immediate surgical attention than the operation primarily proposed. Should convincing data be found (a) of a carcinomatous condition of the pylorus and stomach without extensive involvement of the lymphatic glands and surrounding structures, or (b) if ulceration or cicatrization at the pyloric region be demonstrated in a patient of about forty years of

age and the general conditions favorable to radical procedures, then remove the diseased structures before performing the anastomosis. While it is true that benign pyloric conditions very closely resemble malignancy and it is often impossible to differentiate one from the other on the operating table, still my experience urges me to emphasize the importance of giving the benefit of the doubt to malignancy and to act radically.

Choice of Operation. When the pylorus is obliterated by operation or disease, the anterior surface of the stomach is selected for anastomosis by most surgeons on account of (a) it takes less time to perform it than on the posterior, (b) there is less handling of the stomach and bowels (c) its performance is easier and (d) the results in the vast majority of cases when properly performed, are satisfactory. In anterior gastroenterostomy, the loop of bowel is liable to become adherent to the abdominal wound and give rise to pain and even obstruction of the bowel, simulating vicious circle. This occurred in one of my cases of pylorotomy and anterior gastroenterostomy for an ulcer of the stomach and it demanded a second operation on the fourteenth day after the first. There were firm adhesions of the loop to the abdominal wall and obstruction of the efferent segment of the jejunum about five inches below the anastomosis. The bowel was sharply doubled upon itself and held there by adhesions. In this case the proximal arm had been plicated in order to prevent vicious circle. On the thirteenth day after the primary operation the symptoms of obstruction began with occasional vomiting. Previous to this time the patient had made most satisfactory progress. Upon breaking down the adhesions, straightening out the intestines, and fastening a portion of the great omentum in front of it for protection, an excellent recovery resulted. In antecolic anastomosis the loop of jejunum or its mesentery may be compressed by the abdominal wall and give rise to ilius, which may also be mistaken for vicious circle. It is recognized that volvulus of the jejunum has occurred after this operation. After the patient begins to walk around and gains

flesh, the weight of the transverse bowel and omentum occasionally drag on the anastomosing loop and give trouble to the patient. Whether the anterior or the posterior operation is performed a loop of bowel is liable to slip under the bridge at the junction of the entero-enterostomy and cause strangulation of the bowel or compression at the route of its mesentery; a spur may form between the afferent and efferent openings with the stomach; and a valve formation at the efferent outlet may direct the stomach contents into the afferent segment. It is now fully recognized that vicious circle and other complications are far more common after an ordinary antecolic than after a retrocolic anastomosis.

It is more than probable (Braun and Mikulicz) that the duodenum and upper portion of the jejunum are more tolerant to the action of the gastric juices than are the lower segments of the small bowel. In support of this property is the fact that several cases of peptic jejunal ulcer below the anastomosis have been observed to follow the anterior operation, in which of course the proximal arm is much longer than when the posterior operation is performed. This is an argument in favor of retrocolic gastroenterostomy.

Jejunal Loop. Pass the hand under the great omentum, push it to the left, raise the transverse bowel, seize hold of the jejunum at its origin, and bring a loop of it out and up to the stomach, varying in length from twelve to twenty inches according to the distance required for the case at hand, taking care that it is neither too short nor too long. If the proximal arm is too short it will constrict the transverse bowel and if too long it forms a pouch for bile and pancreatic juice. An important guide in determining the proper length of the proximal arm is to remember that in time the duodenum and proximal arm of the jejunum in cases of pylorotomy and pyloric obstruction become more or less shortened and atrophied because they no longer perform the function of transmitting food, and only convey bile, pancreatic and duodenal secretions. Allowance must be made for

this shrinkage as well as for future changes that occur in the structures, the omentum often increases in size and weight as the patient receives proper nourishment, which bears down upon the anastomosing loop. A close fit without sagging will be found about the correct length of the jejunal segment for anterior anastomosis. For anatomic reasons a much shorter loop suffices for retrocolic anastomosis, (about nine inches). I do not approve of the very short proximal arm used by Czerny, Mikulicz, Kocher and others, because bile and pancreatic juice will assuredly mix with the stomach contents and often distress the patient. (Binnie, p. 255.)

Circulus Viciosus. A vicious circle is a very serious condition and usually causes death by starvation and exhaustion if not rectified. The ingesta pass into the afferent segment of the jejunum and through the duodenum back again into the stomach. It becomes mixed with bile and pancreatic juice. The stomach as well as the duodenum and proximal arm of the jejunum becomes over distended and vomiting ensues. A vicious circle is also noticed to occur by the current of food passing reversely to that just described, namely; from stomach through pylorus, duodenum, proximal arm of jejunum and back into the stomach. Even when jejunal anastomosis is made between the two arms, I have seen a vicious circle form in three ways. (a) The ingesta passing from stomach, through the proximal arm of jejunum along the duodenum and via pylorus to stomach. (b) The stomach contents passed into the distal arm to the anastomosis between the afferent and efferent segments of the jejunum then into the duodenum and back into the stomach through the pylorus. This occurred when the anastomosis between the two arms of the small intestine was situated on a higher plane than the termination of the duodenum and a long loop of intestine was left between the distal end of the duodenum and arm to arm anastomosis. (c) The stomach contents passed through both arms of the stomach anastomosis and the two currents joined at the arm to arm anastomosis and diverged into the duodenum by way of the portion of

the jejunum distal to it and found its way back to the stomach through the pylorus.

A gastro-intestinal anastomosis should be performed in such a manner as to prevent a vicious circle forming in either of those ways. It is clear that a true vicious circle cannot occur when the pylorus is obstructed by operation or disease, but a semi-circular vicious condition may form, enormously dilating the proximal arm and duodenum with gastric contents, bile, pancreatic and duodenal secretions, and these be forced into the stomach by way of the proximal or distal arm, when an arm to arm anastomosis has been performed. Return of duodenal and proximal arm contents is prevented by Fowler, of Brooklyn, by tying off the proximal arm close to the stomach after a gastroenterostomy and arm to arm anastomosis. It is true that the proximal arm may be plicated and lessened in calibre, leaving sufficient space for the flow of bile and pancreatic juice so as to prevent a vicious condition when the pylorus is completely obliterated either by disease or operation. But while the pylorus is patulous, plication of the proximal arm near the stomach is not sufficient without an arm to arm anastomosis, on account of the food that may pass through the pylorus. This being the case, it had better be obliterated by plication as devised by Scott and Matolli or by Fowler's wire suture.

There is an objection to the admission of bile and pancreatic juice into the stomach under any circumstances as demonstrated by the Mayo Brothers and others. This being true the most perfect gastro enterostomy anterior or posterior is that which obliterates the calibre of the proximal arm completely near the stomach; anastomoses the two arms; and makes a free communication between the stomach and distal arm.

Fowler's operation fulfills all these indications but there is one objection to it and that is the uncertainty of the future behavior of the ligature, silk or wire, that shuts off the proximal arm.

In Wölfler's and Roux's procedure and their modifications the vicious circle is prevented but by a difficult, time consuming,

and dangerous technique, all of which have been so often demonstrated in their application by different men.

Doyen (27 Congress of German Surgeons, Berlin 1898) improved on Wölfler's method of preventing vicious circle. It consists in—(a) gastroenterostomy (b) entero-enterostomy, and (c) division of the afferent segment of jejunum between the two anastomoses. Upon cutting through the afferent segment, the ends were turned in serosa to serosa and sutured. In my opinion this is the procedure par excellence in principle. When the ends of the bowel are inverted it can be performed very rapidly. Pass a circular continuous suture around the cut end of bowel and invert the end thus closed beneath a purse-string-suture bringing serosa to serosa and it will be noticed that much time is saved over suturing and it is just as efficient.

Leucke (Wiener, Klin Wochenschrift 1899) pointed out the importance of dividing the jejunum first and arranging the segments so that after both anastomoses are effected the normal direction of peristalsis is maintained. I have observed that the entero-enterostomy should be opposite to, or below the termination of the duodenum, to prevent an upward peristaltic action of the proximal segment and dilation of it.

The cause of a vicious circle has not yet been mentioned. In my opinion there is one anatomic fact which contributes to this that I have not yet observed in print. It is taking into consideration the calibre of the afferent and efferent openings at the stomach anastomosis. The afferent opening is always larger than the efferent, because the size of the jejunum, from its origin at the duodenum, to its termination at the ilio caecal valve, *decreases inch by inch*. I wish to emphasize the bearing the cone shaped condition of the small intestine from above downward has upon gastric anastomosis, for consequently according to the law of resistance the stomach contents should always pass preferably into the proximal arm. Were it not that this is counteracted by peristalsis, and the current of bile and pan-

creatic juice, a vicious circle would likely form in every instance of simple gastro-intestinal anastomosis whether anterior or posterior where no means had been taken to lessen the size of the proximal arm opening.

McGraw's Ligature is a distinct advance in stomach surgery. Whenever I trusted to the elastic ligature I felt uncertain of what was going to happen, but must say that it always cut through, never broke, and had no complications arise from it. Compared with twine or silk it is more liable to deteriorate; is more scarce, not always in stock; is much more difficult to use, and does not accomplish the purpose to which it is applied any better. This ingenious (McGraw) ligature anastomosis is the most rapid of any operation yet discovered. In employing one large ligature, elastic, hemp, or silk, the structures within its grasp are pleated upon themselves, in which position they may more or less remain and no opening is effected until the ligature cuts through. These two objections are obviated by employing two stout silk ligatures, and making a small primary anastomosis between them as about to be here described. I agree with the results obtained by Dr. J. W. Draper Maury (J. A. M. A., Sept. 17th, 1904) with twine instead of the elastic ligature. Twine or any stout silk thread will invariably cut through the stomach and bowel within its grasp in about three days and will certainly "punch out as large an opening as is embraced by the elastic." (Maury.)

ANTECOLIC GASTROENTEROSTOMY.

Stout Silk Ligature. Anterior or posterior gastroenterostomy may be rapidly performed as follows: Use clamps. Bring the loop of jejunum to the stomach and fasten it to its most dependant part (Mayo) by means of a continuous suture. Open the stomach and small bowel to the extent of half an inch for an immediate anastomosis and insert three posterior sutures, bringing mucosa of stomach to that of the bowel. Crush an inch of stomach wall and bowel on each side of the immediate anastomosis

with a pressure forceps, which groove forms a bed for the silk cord. Insert two stout silk ligatures or twine, tie them as tightly as you can cut the ends short, the knots are within the opening of the immediate but small anastomosis. Complete the small anastomosis by a continuous inversion suture (Ferguson), leave the final knot within the lumen of the immediate anastomosis (Connell) and complete the entire gastroenterostomy by a continuous suture in front. Through the immediate small anastomosis the gastric contents find an exit at once which is important after pylorotomy or in cases of pyloric obstruction. In order to prevent duodenal and other complications plicate the proximal arm near the stomach converting it into a tube for the double purpose of (a) preventing ingesta entering it and (b) to allow sufficient space for conveying bile and pancreatic juice. If the saving of time is a very prominent element in the case, and the pylorus is obstructed, the operator may now stop and close the abdomen, knowing that one undesirable condition will follow and that is the admixture of bile and pancreatic juice with stomach contents. When the pylorus and duodenum are left in a condition capable of performing their function as food carriers immediately or in sometime afterwards, the lumen of the proximal arm had better be completely obstructed by (a) tight plication or (b) ligature (Fowler) or (c) by dividing it and inverting the cut ends; and at the same time make an anastomosis between the two arms by means of suture and ligature, a small primary opening being left for immediate drainage and provision ensured for a larger opening at the end of two or three days to convey food stuffs as well as duodenal contents from the proximal segment of duodenum to its distal.

The artificial foramen made when the entero-enterostomy is completed should be obliterated by several sutures (Mayo) or as represented by a simple suture, which prevents bowel passing through the opening and becoming strangulated. This is no imaginary sequel but has actually occurred and caused death.

RETROCOLIC GASTROENTEROSTOMY.

Stout Silk Ligature. (1.) Gastroenterostomy.

(a) Immediate small anastomosis with suture.

(b) Permanent large anastomosis with stout silk and suture.

(2) Entero-enterostomy.

(a) Immediate small anastomosis with suture.

(b) Permanent large anastomosis with silk and suture.

(3) Division of jejunal loop and inversion of both bowel ends. This is done before any anastomosis is begun and the segments are brought into proper relationship one to the other.

Thanks to the suggestions of McGraw and Maury this procedure can be carried out with speed, accuracy, assurance and efficiency. It is preferable to perform it on the posterior surface of the stomach when feasible and by this means troublesome adhesions, bowel kinking volvulus and obstruction are minimized and a circulus viciosus is prevented.

Finney's operation is the most ideal of all stomach anastomosis because the ingesta pass through the duodenum over the ampulla of vater and mucus membrane, and imparts the normal stimulus for a free flow of (if not the secretion of) bile, pancreatic juice and duodenal secretions.

Its technique by means of stout silk ligatures is simplified and the time for its execution greatly shortened. Whenever this operation fulfills the required indications it should be the one chosen.

Surgeon Goodbrake's Poor Shot.

Dr. Christopher Goodbrake of Clinton, deceased, for many years one of the leading members of the State Society is the hero of a good story recently related by Col. Warner, now commissioner of pensions.

In a recent speech in the national house just before he left it to become pension commissioner Mr. Warner, of Clinton, told a story of a surgeon in his regiment in the Union army. The story was related in a debate on a bill to give an old soldier an honorable record. This was the story:

We had a surgeon in our regiment, Christopher Goodbrake. The orders were strict against

foraging. We were ordered to protect the rights of the people of the south, trying to win them by fair treatment. Gen. Grant rode up on a couple of soldiers of my regiment, the Twentieth Illinois, who were skinning a hog. He ordered them tied up by the thumbs. They were new to that sort of treatment, and they began to talk back to him. They said it was all right for a poor private soldier if he killed a hog to be tied up by the thumbs, but the officers could shoot all the hogs they wished to. Gen. Grant asked them what officer they had seen shooting a hog, and they said they had seen Surgeon Goodbrake shoot a hog. Gen. Grant sent back an order putting Goodbrake under arrest.

We were nervous and somewhat frightened, as we were expecting to go into action at any time, and we wanted our surgeon with us. We sent a request to Gen. Grant asking permission for Goodbrake to remain with the regiment, and he gave that permission, and that was the last we heard of it for about a year.

Gen. Webster of Grant's staff was taken sick and Grant, having learned of Goodbrake's skill and ability as a surgeon and physician, especially detailed him to attend Gen. Webster. Webster became convalescent. One night down in Tennessee by the camp fire Goodbrake was walking back and forth, Grant was sitting on his camp stool, and, finally, Goodbrake turned to him and said: "General, why did you place me under arrest that time? Was it because I missed that infernal pig?" That was the end of that arrest and that order.

The Physicians Defense Company of Ft. Wayne, has been victor in its contest with W. R. Vredenburg, state superintendent of insurance, in his suit in the circuit court to force the Physicians' Defense company of Fort Wayne, Ind., out of business in Illinois. In three attacks in court the defendant company has won and Judge Dunne has dismissed for want of equity the bill filed to enjoin its further conduct of business.

On Easy Street.

Dr. Geo. O. Pope of Latham, Logan County, graduated in 1885, at the Michigan Medical College, has evidently attended strictly to his business. On March 18th he purchased an estate close to Latham, containing 200 acres for which he paid \$29,000.

Another Jekyll and Hyde.

Dr. Carl D. Stone of 2200 Prairie Ave., Chicago, is being investigated by the committee on ethics of the Chicago Medical Society. It is charged that he was convicted in the U. S. District Court for sending improper matter through the mails and was fined \$500. In this trial it seems he was known as David D. Stone. Under his real name it seems he had a residence on a popular street and was a member of the county society.

Dr. Ray formerly house physician at the Palmer House, Chicago, as a result of unfortunate habits was recently fined \$20 and costs and sent to the Bridewell to straighten out.

The Illinois Medical Journal.

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APRIL, 1905.

NEXT ANNUAL SESSION, ROCK ISLAND, MAY 16, 17, 18, 1905.

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BILLS OF INTEREST TO THE MEDICAL PROFESSION UNDER CONSIDERATION BY THE 44TH GENERAL ASSEMBLY OF THE STATE OF ILLINOIS.

We present herewith a synopsis of all bills before the Senate and House at the present time giving the number, date of introduction, the name of the law maker introducing each, the title of the bill and its disposition. In the list will be found a few not strictly medical. For example, Senate Bill No. 17 relates to the assignment of wages which is mentioned in order that our members may be informed of a change of the law on this subject. House Bill No. 60, is mentioned to show that the movement for more examining boards in Illinois continues and that the medical profession will and can have a separate board whenever they go after it as a united body and have a proper representative in the capitol to advocate and not hinder their efforts. Finally the names of the members of the principal committees to which these bills have been referred are given.

A number of these bills are dangerous and should be attacked in committee. Steps to this effect have been already taken by the members of the legislative committees of the State Society and the Chicago Medical Society. If you have not already done

so write your member at once regarding your wishes. Do this especially regarding Senate Bills No. 292, now on third reading. No. 169 on third reading and House Bills 19, 228, 229, 432 and 577.

SENATE SYNOPSIS.

No.	When introduced.	By whom introduced.	Abstract of Title of Bill.	Disposition.
17	Jan. 17.....	Dixon	Act in relation to the assignment of wages, income or salary.....	Third reading.....
97	Jan. 25.....	McKenzie	To regulate the civil service in the charitable institutions.....	Civil Service.....
144	Feb. 1.....	Humphrey	To provide for the treatment and care of persons afflicted with rabies.....	Appropriations
145	Feb. 1.....	Humphrey	To authorize school districts to establish and maintain classes for crippled children	Education
146	Feb. 1.....	Humphrey	To authorize school districts to establish and maintain classes for the deaf pupils.....	Education
169	Feb. 7.....	Stubblefield	To amend an act to create and establish a Board of Health in the State of Illinois...	Third reading.....
171	Feb. 7.....	Stubblefield	To regulate the practice of medicine in the State of Illinois and to repeal an act therein named.....	Tabled. See S. B. 292....
225	Feb. 21.....	Clark	Creating a State Board of Examiners of Registered Nurses and defining its duties and powers.....	Passed
226	Feb. 21.....	Clark	Regulating the practice of dentistry.....	Passed
230	Feb. 21.....	Campbell	Providing for the training of employes in public charitable and penal institutions...	University of Illinois.....
237	Feb. 23.....	Galpin	To regulate the practice of optometry.....	Passed
268	Feb. 28.....	Dixon	Providing for the location, erection, organization and management of a colony for epileptics and for an appropriation therefor	Appropriations
271	Feb. 28.....	Hall	For the regulation of scientific experimentation on human beings and animals....	Passed.....
292	Mar. 2.....	Com. on Lisc. and Mis. as a substitute for S. B. 171.....	To regulate practice of medicine in State of Illinois.	Third reading.....
311	Mar. 7.....	Chafee, (By request)	Regulating the practice of osteopathy.....	Judiciary
362	Mar. 14.....	Clark	To amend an act regulating the practice of pharmacy	Judiciary

SENATE COMMITTEES.

Appropriations—Gardner, Chairman; Hughes, McKenzie, Townsend, Pemberton, Mueller, Juul, Barr, Hamilton, Lundberg, Evans, Hall, Curtis, Templeton, Campbell, Hull, Powers, Burton, Cunningham.

Civil Service—McKenzie, Chairman; Berry, Curtis, Hamilton, Humphrey, McElvain, Stubblefield, Rees, Sucher.

Judiciary—Humphrey, Chairman; Chafee, Berry, Galpin, McElvain, Acton, Dunlap, Henson, Burnett, Hamilton, Dixon, Barr, Lundberg, McKenzie, Juul, Bartley, Helm, Parker, Evans, Jandus, Maher, Burton, Cunningham, Hull, Sucher.

University of Illinois—Templeton, Chairman; Barr, Juul, Dunlap, Jandus.

License and Miscellany—Evans, Chairman; Clark, Farnum, Stubblefield, McShane, Acton, Hall, Gardner, Burnett, Powers, Sucher, Cunningham, Jandus.

HOUSE SYNOPSIS.

No.	When in- troduced.	By whom introduced.	Abstract of Title of Bill.	Appropriations.
119	Jan. 25.....	Nagel	An act providing for the regulation of the embalming and disposal of dead bodies, for a system of examination, registration and licensing of embalmers and imposing penalties for the violation of any of its provisions	Third reading.....
136	Jan. 26.....	Glackin	An act to provide for the location, erection, organization and management of a state sanatorium for persons afflicted by tuberculosis, and making an appropriation for the purchase of land and the construction of the necessary buildings and the maintenance of the sanatorium.....	Appropriations
182	Feb. 1.....	Kleeman (By request)	An act to provide for the treatment and care of persons afflicted with the disease of rabies	Third reading.....
200	Feb. 3.....	Troyer	An act entitled "An Act regulating the publishing of statements made by companies, associations or societies operated for the purpose of furnishing the sick, accident or death benefits, and purporting to show their financial condition, and for fixing the penalty for violation thereof.".....	Insurance
228	Feb. 7.....	Allen	An act to amend "An act to create and establish a board of health in the State of Illinois," approved May 28, 1877, in force July 1, 1877, to establish a board of medical examiners.....	Judiciary
229	Feb. 7.....	Allen	An act to regulate the practice of medicine in the State of Illinois and to repeal an act therein named, approved April 24, 1899, in force July 1, 1899.....	Judiciary
274	Feb. 16.....	Mundy (By request)	An act to amend sections two (2), three (3) and seven (7) of an act entitled, "An Act to regulate the practice of medicine in the State of Illinois, and to repeal an act therein named," approved April 24, 1899, in force July 1, 1899.....	Judiciary
313	Feb. 21.....	Bowles (By request)	An act to regulate the practice of chiropody in the State of Illinois.....	License
330	Feb. 23.....	Glackin	An act to provide for the location, erection, organization and management of a state sanitarium for persons afflicted with tuberculosis, and making applicable thereto "An act to regulate State charitable institutions and the State Reform School and to improve their organization and increase their efficiency," approved April 15, 1875, and making an appropriation for the purchase of land and the construction of the necessary buildings and the maintenance of the sanitarium.....	Appropriations
351	Feb. 24.....	Isermann	An act to license peddlers, hawkers and itinerant vendors of wares, goods and merchandise outside of incorporated cities, villages and towns.....	Second reading.....
353	Feb. 24.....	Hill	An act to provide for the location, erection, organization and management of a State colony for persons afflicted by epilepsy, and making an appropriation for the purchase of land and the construction of the necessary buildings and the maintenance of the colony.....	Appropriations
380	Mar. 1.....	Clettenburg (By request)	An act entitled, "An Act to encourage matrimony and impose a tax on male persons over the age of thirty years.".....	Revenue
393	Mar. 1.....	Sheen	An act to prevent the hereditary transmission of lunacy, idiocy, tuberculosis, feeble-mindedness, criminality and other like evils that entail public expense or social degeneracy.....	Miscellaneous Subjects...

HOUSE SYNOPSIS—Continued.

No.	When introduced.	By whom introduced.	Abstract of Title of Bill.	Appropriations.
463	Mar. 8.....	Sheen	An act to prevent and punish the using of hypnotics, narcotics, opiates and other drugs for the purpose of aiding in the commission of crime.....	Miscellaneous Subjects...
464	Mar. 8.....	Trautmann	An act to amend and revise and to provide for the appointment of a board of commissioners of public charity, and defining their duties and powers, approved and in force April 9, 1869.....	Public Charities.....
465	Mar. 8.....	Williams	An act concerning the detention, commitment and transfer of insane patients.....	Public Charities.....
403	Mar. 2.....	Giljespie	An act to provide a department in one of the hospitals for the insane for the detention and treatment of dipsomaniac inebriates and those addicted to the excessive use of narcotics.....	Public Charities.....
432	Mar. 3.....	Trautmann	An act to regulate the practice of optometry in the State of Illinois.....	Judiciary
539	Mar. 15.....	Castle	An act to regulate hawkers and peddlers of goods, wares, merchandise and medicine, and to provide a license therefor.....	Judiciary
577	Mar. 15.....	Rinaker	An act to amend sections 15, 16, 17 and 18 of an act entitled, "An act to create and establish a board of health in the State of Illinois," approved May 28, 1877, in force July 1, 1877, as amended by an act approved May 10, 1901, in force July 1, 1901, and to add an additional section to be numbered section nineteen (19).....	Judiciary
601	Mar. 22.....	Sullivan	An Act to define a law stenographer and to provide for the examination and commissioning of law stenographers, and prohibiting persons not qualified to practice such calling, creating law stenographers' examining boards in the several appellate court districts of Illinois, and defining and regulating the powers and duties of such boards, the fees for examinations and the compensation of such members, providing for a roll of law stenographers to be kept by the clerk of the Supreme Court, and making it a misdemeanor to falsely represent one's self to be a commissioned law stenographer or without commission to practice that calling as defined by the act, and specifying certain requirements for the passage of the examination provided for	Judiciary

HOUSE COMMITTEES.

Judiciary.

Messrs. Castle, Chairman: Allen, Pendarvis, Trautmann, Arnold, Drew, Breidt, Kleeman, Church, Smejkal, Magill, Lindly, Dailey, Rinaker, Shriner, Sheldon, Ronalds, Pierson, McCSurely, Williams of Cook, Hill, Covey, Phillips, McHenry, McCaskrin, Bowles, Burke, Campbell, Cooke, Craig, Crangle, Daugherty, Geshkewich, Gray, Luke, Manny, McGoorty, McKinnley of Cook, Mundy, Pattison, Poulton, Williams of Williamson, Browne.

Public Charities.

Messrs. Backus, Chairman; Trautmann, Kittleman, Emerson, Heinl, Rose, Echols, Donahue, Harris, Kowalski, Zinger, Laskowski, Browne, McDonough, Mitchell, Reilly, Witt, Wilson of DuPage.

REPEAL THE PRESENT CONVICT LABOR LAW.

The Business Men's Association of Bloomington, of which by the way, Dr. J. B. Taylor is a director, has taken strong grounds in favor of the repeal of that pernicious piece of legislation forced on the recent General Assemblies mainly by the mistaken efforts of the labor organizations. The association has issued a pamphlet showing that this same plan has been unsuccessfully tried several times before and that it is less likely to succeed now than it was then. Allusion is made in a very limited way to the mental strain of the convicts confined, as the matter now stands, with absolutely nothing to do. Much more might be said along this line especially as regards the increase of tuberculosis and other diseases due to confinement in small cells and impure air. We believe that this legislation has already been shown to be a great mistake and that the best interests of all concerned as well as the commonest demands of humanity require its repeal at the earliest possible moment.

EGAN'S TERGIVERSATIONS.

The bulletin of the Chicago Health Department for March 11, 1905, prints the following paralogsms which explain themselves:

Official Utterances of Dr. J. A. Egan, Secretary of the Illinois State Board of Health, on Chicago Lodging-Houses.

1905.

Letter of Dr. Egan to the Hon. Edward J. Brundage of the board of Cook County commissioners, March 6, 1905.

"For several months past I have been convinced of the necessity of State sanitary supervision of the lodging houses of Chicago. I realized that the conditions in these were deplorable, but I did not

1901.

Circular of Dr. Egan on the inspection of Lodging Houses in the City of Chicago, 1901.*

Rule 1. "Inspection of lodging houses as provided by these rules and regulations applies, at the present time, only to the City of Chicago."

Rule 4. "It shall be the duty of the inspector in chief and assistants to thoroughly in-

fully realize how deplorable they were. * * *

"The Chicago Health Department, I am told, gives but little heed to the sanitary conditions of these houses, disinfesting only in a perfunctory manner when a case of smallpox occurs * * *

"Be this as it may, the fact remains that dirt and disease run riot in these lodging houses.

"As I have told both Governors Yates and Deneen, I have felt for several months that we should have entire supervision over the lodging houses or none at all. The prevailing conditions are unfortunate. We can say to a landlord how many beds he may place in a room; we cannot require him to keep these rooms in a sanitary condition.

"With the approval of Governor Deneen I have prepared an amendment to the act giving the Board sanitary supervision over these lodging houses. If this becomes a law and the appropriation committee gives a fair sum to carry out its provisions, you can rest assured that the lodging houses of Chicago will cease to be breeders of consumption.

"It is not possible for the State Board to take any action now on the fumigation of these houses unless with the consent of the landlords. I intend to visit Chicago in a few days and will inspect the worst lodging houses with the chief inspector and see what can be done by moral suasion."

investigate all lodging houses in the City of Chicago at regular intervals and ascertain whether the management of such lodging houses fully complies with the State laws and city ordinances relating to lodging houses. It shall also be the duty of such officers to report to the secretary of the State Board of Health all instances of unsanitary conditions found in any lodging house, providing such conditions are not immediately corrected by the management of such lodging houses.

Rule 6. "Whenever an inspector finds that the management of any lodging house has violated the State law or city ordinances relating to lodging houses he shall immediately swear to a complaint against the offender before some justice of the peace, or cause the same to be done, and prosecute the case with vigor in accordance with the law."

"It will be noticed that section 2 of the [State] act confers extensive powers and important rights upon the State Board of Health in the discharge of their duties. They have the authority to make any and all rules and regulations they may deem necessary to enable them to fully enforce the different provisions of the State Board of Health act. * * * Such rules and regulations, when promulgated, have the force and authority of law, and are to be enforced if necessary by the entire power of the State."

**Rules and Regulations of the State Board of Health." Based on an act in force July 1, 1901. "Sec. 15—The State Board of Health shall have supervision of all lodging-houses in cities of 100,000 or more inhabitants. They shall order such inspection of such lodging-houses from time to time as shall be deemed necessary to carry out successfully the regulations of the Board and the provisions of this act."

A NOTE FROM ROCK ISLAND.

The time for the next meeting of the State Society, to be held at Rock Island on the 16th, 17th and 18th day of May, is drawing near. The plans of the local committee are well nigh complete.

The first circular letter informing the profession of the meeting together with the advantages to be derived and the natural beauties of the city of Rock Island and surroundings has been mailed to every regular practitioner in the State and it is hoped that the same has made a lasting impression on its recipients. However, to those worthy members who are inclined to take the matter of attending this meeting indifferently, or even have assigned the letter to the waste basket and forgotten all about it this letter is intended. Its aim is to at least partially arouse them from their hibernating condition and to once more urge and impress upon them that there will be something doing in this neck of the woods, something they cannot well afford to let pass by, as one worthy competitor said to me the other day: "I can not very well afford to attend but I can still less afford not to be present," and this is true of every practitioner who desires to keep in the front rank.

These are strenuous times, competition is keen, the progressive man realizes that he must push on or fall behind and be lost in the swamp of oblivion.

The program is complete. No labor has been spared to make it interesting, instructive and entertaining. The halls are engaged and the usual reduction in railroad rates has been secured and the entertainment committee has nearly completed its task. All you have to do is to take advantage of it and be with us.

The Committee.

GOVERNOR HERRICK OF OHIO.

The odious features of the Yates administration of state institutions, now happily ended, seem destined for repetition in Ohio which has, in the person of Governor Herrick a chief executive who apparently proposes to create a "machine," and to this end willingly follows the guidance of the unscrupulous "bosses" of his party.

Although scarcely more than a year has elapsed since the governor of Ohio assumed office, he has invaded and reorganized on a political basis several of his State's benevolent institutions, and the public schools, higher institutions of learning, and even the churches have come to feel the demands of his machine.

The latest and most flagrant capitulation to the whims of a selfish political ambition was shown by Ohio's present executive in directing the removal of Dr. A. P. Ohlmacher from the superintendency of the Ohio Hospital for Epileptics, and for this offense the governor must answer directly to the medical profession of Ohio which, through its organs and its organizations, warned against the political prostitution of that institution in which the superintendent was standing against its spoliation by politicians and grafters. What the physicians in Illinois accomplished towards securing the ultimate defeat of Governor Yates because of his disregard of the profession's wishes and ideals in relation to the state institutions and boards is doubtless in store for Governor Herrick of Ohio.

DOES VACCINATION PAY.

Evil minded people sometimes attempt to abuse physicians for urging vaccination of their patients. They charge that the trivial

sums obtained by medical men for performing this highly important but little appreciated operation is sought for the purpose of helping out their meager income from the practice of medicine. In other words the doctor is wholly selfish and mercenary in seeking to protect the community. Such persons should be permitted to read the following extract from the Bulletin of the Health Department of Chicago, for March 18, 1905:

"An instance of the risk persons will run rather than submit to the trivial annoyance of vaccination came to light last week when a man, holding an important position in one of the largest department stores in the city, was stricken with smallpox and sent to the Isolation Hospital. This man never had been vaccinated, though an order was issued last fall and was supposed to have been enforced, that all employes in this store should be vaccinated. Upon investigation it was found that several other men holding important positions in this house, as well as the one who fell a victim to smallpox, had helped to lead the clerks up to be vaccinated, but excused themselves from complying with the order. This man is sorry now and reproaches himself for ignoring the warning advice of experience."

There is another view of this matter which should appeal strongly to the taxpayer: Since the opening of the isolation hospital in 1896, up to the close of last year, 1,418 cases of smallpox had been received and treated in that institution, involving an expenditure of \$321,157.33. This sum does not include the \$137,241.36 expended for the purchase of ground and construction of the buildings, but includes 4 per cent interest on that sum annually. The average cost per case is, therefore, \$226.48, and, at this rate the 210 cases received since Dec. 31, 1904, will swell the total to \$373,718.13 of wholly avoidable expenditure.

It would seem to be to the interest of the taxpayer—as it is his legal duty—to exert his influence and the authority which the law gives him, to secure the effective safe-guarding of all those over whom he has control against this costly, loathsome and absolutely preventible disease.

MEDICAL POLITICS OF ILLINOIS.

An editorial entitled Governor Herrick of Ohio appears in this issue of the Journal. It was not written nor the writing of it requested by the editor. It was contributed by one who knows well the conditions now

existing in both states. Had we been writing this article we would, as we have frequently done in the past, state that the prostitution of the State institutions of Illinois did not begin with Governor Yates, but has been going on for 12 years, notwithstanding the efforts of the people to rid themselves of the disgraceful conditions. We would also state that Governor Altgeld, Tanner and Yates each seemed to blindly make the same mistake which Governor Herrick is making and that each failed of a renomination or further political preferment as we believe Governor Herrick will fail. The writer correctly emphasizes the influence of the medical profession in these efforts for better government and a more enlightened policy regarding the State institutions. Dr. Ohlmacher was called to Ohio from Chicago, and it is therefor peculiarly fitting that his misfortune and the misdoings of Governor Herrick should be brought to the attention of our members.

* * * * *

There is a great problem before the medical profession of Illinois just at this time. Certain offices in which we have a vital interest are filled by good medical politicians but unworthy men. They are straining every nerve to remain where they are. They are deceiving many worthy medical men into lending them assistance. They are displaying remarkable activity and cunning in courting the support of politicians. The cleansing of our Augean stables will require constant and united effort. It can not be done by a few. It must be demanded by the many. We hope that each member of the State Society is taking a high minded view of this situation and is using his influence for the highest good of the State and his profession. * * * * *

Our attention has just been called to the

offensive letters written by two members of the legislature in response to respectful communications to them by their constituents asking them to oppose the passage of the bills before them which propose a complete surrender to the osteopaths. For lack of space we are obliged to defer full consideration of this matter until next month.

EXCURSION TO PORTLAND.

Arrangements for special cars to the annual meeting of the A. M. A. at Portland next July are in progress as indicated in our last number. The Chicago and Alton Railway will take care of patrons along its line and the Illinois Central along its line which cover a large part of the State.

The rate as announced last month will be \$53.55 from Springfield. No better opportunity for a pleasant vacation has ever been offered to the Illinois doctor. Statistics show that travelers from foreign countries seem to appreciate the beauties of the Yellowstone National Park more than our own citizens. A week in this famous region will be one of the privileges of the trip to Portland.

Correspondence.

TEACHING OF SOCIAL SCIENCE COMMENDED BY A LAYMAN.

Chicago, Ill., March 16, 1905.

Editor: I read with great interest your editorial in the Illinois Medical Journal for February, 1905, in regard to the proposed teaching of applied social science in the University of Illinois.

I should be very glad to have you forward

me a copy of the publication and I will remit to you whatever is your charge.

Thanking you in advance for your consideration, I am

Yours very truly,

Frederick W. Burlingham.

PROPER PAY FOR EXPERT TESTIMONY.

Hillsboro, Ill., March 10, 1905.

Dear Doctor: In this State the law (not justice) takes from us our key of knowledge and compels us to unlock our mental treasure box and make use of the contents at the rate of \$1.00 a day, (fifty cents less than a day laborer's wages,) for any person it deems in need of our assistance. Our only redress for this psychical robbery is to refuse to talk to a lawyer about a case until we have been paid for our advice. By a united effort on our part, I think the majority of our legislators will see the injustice of the present law, and enact one making expert medical testimony worth \$25.00 a day, if we are not to be permitted, like the lawyers, to use our store of knowledge at our own price. We are certainly entitled to fair play in this case, and it behooves us to see that we get it.

Let the secretary of our Medical Societies have some postal cards printed and mailed to each member of the legislature, asking that they use their influence with the representatives to have such a law enacted by the present legislature.

Amos Sawyer.

DR. BAYARD HOLMES ANSWERS A LETTER ON COMMISSIONS.

Dr. George N. Kreider,

Editor Illinois State Medical Journal,
Springfield, Ill.

My Dear Doctor: Nothing is more gratifying or flattering to the writer than to have frank criticism of his ideas, especially when they relate to so complicated a matter as the ethical relations of members of our profession. My address before the North Central Illinois Medical Association, which was so

beautifully presented in your February number, has received considerable of this sort of attention. May I be allowed to present an abstract of one of the letters I received and my reply to it?

Very respectfully,
Bayard Holmes.

Dr. Bayard Holmes, Chicago.

Dear Sir—The subject discussed by you in a recent number of the Illinois Medical Journal is one which had at times occupied my mind for several years. I must state at once that I never accepted a commission, and most respectfully ask you to treat my letter as confidential, as I do not wish to be held up to the contempt of all good men. I am asking a stranger, as I do not wish to lose the respect of anyone of my distinguished friends. Now, will you please tell me if your colleagues of prominence really think as you do about the taker of commissions, and, if so, why? Your picture is absolutely a misconception. I have never undertaken to defend the country doctor, because it seems to be agreed among all college professors and consulting surgeons that he who accepts a commission is totally vile. Now let me state to you my experience, and I believe it is true of almost every physician in every town in the enlightened State of Illinois. The fees charged by every doctor here for fifty years have been fifty cents for office consultations, with medicine, and \$1.00 to \$1.50 for visits. It would be impossible to change these fees without a union of doctors and a distinct breach of ethics. That accomplished it would be impossible to enforce the higher charge. I am a reasonably competent physician, but I do not consider that I am doing my duty to my patient in undertaking operations of a complicated nature when fifty competent surgeons are within an hour of me.

Now, I have never had an operative case that you or any of your colleagues could take out of my hands. None but quacks are ever heard of among the laity. I never had a case operated upon where the patient did not leave the selection of the surgeon entirely in my hands, and where on the other hand the surgeon did not rely on me to see that his bill was paid. I have never had a case where the surgeon did not ask me, not the patient, but me confidentially, not how little but how much the patient was able to pay. In fact, I have always been trusted by both parties to fix the fee. And since most sick people are not over-burdened with money, and most surgeons are poorly paid, and since I believe in upholding the dignity of the profession, I have named the largest fee that the patient could pay. It is idle to say I should make a charge for my services, as the patient is drained, or that the surgeon should pay me in the presence of the patient, since most people of small intelligence would think there had been a previous arrangement to drain him. Even in business the purchaser of real estate is never made to see the commission which is paid by owner to broker, and yet he knows it

is paid. Thus, I have the responsibility of making the diagnosis, of advising the operation, of shouldering its success or failure. If death follows, I bear the onus; the surgeon is gone; his name is scarcely remembered. If a hernia appears, I endure the blame in the mind of the patient, because I made him have that operation done; or if a suppurating sinus results, I endure the criticism.

There is a lawyer in my town who calls in a prominent lawyer in every serious case. I never asked him, but I am sure he would tell anyone that there was a division of fees. I cannot see anything disgraceful about it, but it seems to be all settled. Whether you consider my letter worthy an answer or not, I respectfully ask you to consider it confidential.

Very respectfully yours,

.....
I found this letter extremely interesting, and I believe it was the best presentation of the subject that ever came to me. My answer is perhaps as indefinite as the letter itself, yet I believe it does make a fair, honest and adequate reply. Omitting a few personal paragraphs, it was as follows:

My Dear Doctor:

I have received your extremely interesting letter relative to my article on the Reward of the Profession, and after talking it over with one of my most intimate medical friends I will try to reply.

In reply I wish to say that the very fact that I presented a topic which would at once advertise me to the medical profession of Illinois as one who did not and would not split fees is a sufficient answer to your first question. I certainly mean exactly what I say. As for my colleagues in the practice of surgery or medicine, I would not undertake to express their opinions or vouch for their practices. Some of them I know have given percentages varying from 25 to 75%, and these men are notoriously prosperous. It is my opinion that the interests of the patient are to be held first, and that the greatest objection to fee-splitting lies in the danger to the life and health of the patient which it is likely to entail. For example, you have a patient requiring in your opinion a serious operation. You have received little for the care and diagnosis of the case. The patient or the patient's friends are willing to pay a large fee for a surgical operation. Dr. A. will give you a straight 25% commission. Dr. B. will give 50% and charge a larger fee than A. Dr. C. is just working up business, and is willing to do the operation for \$50.00 and no questions asked. Dr. D. will give no commissions, and has no opportunity of even swapping patients with you. Allowing now that they are equally able, skillful and careful, which one would you select, and how would you make your selection? Presuming that the laws which govern the price of land govern also the percentages, which of these surgeons would your patient knowing all the circumstances be likely to select? Would he select the man who regularly gives 25%; would he select the one who finds it necessary to give 50 or 75%; or would

he trust himself to the one who frankly states a fee for his services alone?

In making these questions I am not departing from the sphere of your personal knowledge, and I certainly am not asking questions which do not appear in practice. I have found it so difficult to honestly consider the indications for operation,—I have so often been confused by the many-sided aspects of a condition seeming to require surgical treatment,—I have so often found myself lapsing from the judicial aspect of strict integrity, that I have been unwilling to complicate a sufficiently complicated relation with my patient by including in the problem the economic interests of another physician. If I considered the fee the essential element of my practice, if it were my first thought to land my patient, if I trimmed my sails to my personal ambition instead of to my professional pride, my thesis would be the proper percentage to distribute. I would insist that my particular skill in some procedures would diminish this percentage to a minimum, while my lack of skill in other departments, and my inability to gracefully handle certain classes of patients, would make it equitable for me to pay the higher percentage, even a maximum. My percentages would also be varied by the bulk of business from you. If you brought me only N dollars' worth of work, you would receive only X per cent of commissions; if you brought me A N dollars' worth of work, you would receive B X commissions.

This subject of compensation for medical services is one of a professional rather than a personal fitness. The office consultation of a doctor depends not upon the standing and professional character of this individual physician, but upon the standing and character of the profession as a whole. Every man who has professional qualities below the average degrades the profession and ultimately lowers the fees no matter what his personal compensation may be. Every man who rises above the average of the profession in character, equipment and ability raises the possible fees of every physician whether his personal income is increased or not. My own ideas weigh for little, but it has always seemed to me that the physician and the surgeon should be guided by principles which do not and cannot prevail in the wheat pit, the cabbage patch or the real estate market. My notion of these relations is best expressed in the motto "To everyone according to his need; from everyone according to his ability." As a doctor the motto may be specialized "To every patient according to his need; from every patient according to his ability."

One of my first lessons in fees came about in the practice of a colleague. It was before the days of antitoxin. He had performed more than a hundred intubations. The son of a prominent business man had diphtheritic laryngeal stenosis. My friend was called and intubated the asphyxiated child. He cared for

him, removing and re-introducing the tube at intervals, for ten days, neglecting during this time all his other practice. The child recovered, and the doctor proposed to send a bill. He consulted me. I asked this question: What would be the share of the father's estate which this child would naturally inherit if it went to probate at this time? Answer: A half million dollars. Question: What would be the charges of a real estate man in transferring property of this amount from one owner to another? Answer: Two and one-half percent, or \$12,500. What would be the monthly income of this youth with such an inheritance at the average six per cent rate? Answer: \$2,500.00. Is the reputation of the real estate man, is the burden and danger of his occupation, the importance and skill of his manipulation, the result and risk of his possible error, and the value of his services, greater or less than that of the physician in question? Answer: Certainly not greater. Let the fee be half that of the real estate man, \$6,250.00. The fee was made \$2,500.00, and the newspapers were full of it for a week or two, and it was paid in full after friendly arbitration. I never received any direct or indirect compensation for my services in the matter. I believe, however, that the fees for surgeons at least have been increased by the notoriety of this rare service and rare charge. Antitoxin soon came into use, and the need of intubation almost entirely disappeared.

It would seem from your letter that representing practitioners of medicine you assume that there is a class conscience among you antagonistic to college professors and consulting surgeons, and that your patients are your friends, as if other relations existed between the group you contrast and their patients. I should regret exceedingly the spread of such a sentiment. It is a fact that in modern times the work of physicians is highly specialized; some tend more closely to the everyday ills of a community, and others to rarer manifestations of disease; but all must be doctors, and every one must be a member of the medical profession, and we ought to have a conscience for the whole profession and not for any group. I am interested in a narrower line, and I practice in a smaller sphere; but I believe I have the essential feelings of the doctor, and I try to make, and I believe I succeed in making, most of my patients my personal friends. It is inconsistent with that attitude of mine that I should drain my patient. He ought to pay; he is better satisfied when he pays; it always seemed to me that the convalescence was more rapid and more complete when he had paid. No community can possibly have efficient medical service that does not pay and pay better fees than you say the custom of many years has fixed and establish in your community.

Hoping that this discursive reply will give you a correct idea of my personal attitude, and I believe that of the majority of the medical profession, I am very respectfully yours,

Bayard Holmes.

Chicago Medical Society.

The Medical Society of Cook County, Regular meetings are held every Wednesday evening from October to June at the Chicago Public Library Building, Randolph Street Entrance in the large hall on the ground floor toward West end of the Building.
Membership 1512.

OFFICERS:

J. B. MURPHY, 100 State StreetPresident
FRANK X. WALLS, 4307 Ellis AvenueSecretary
A. E. HALSTEAD, 2937 Indiana Avenue.....Treasurer
W. A. EVANS, 103 State Street.....Chairman Medicolegal Committee
WM. HARSHA, 103 State Street.....Chairman Membership Committee

APRIL, 1905.

At the meeting of the Chicago Medical Society, held February 8, the following papers were read:

1. Present Limitations in Serum-Therapy, by Dr. H. D. Ricketts.

2. Plague and Cholera Epidemic in Philippine Islands, by Dr. Paul C. Freer. (Abstract herewith).

Discussed by Dr. David J. Doherty. Remarks herewith.

3. Intussusception During Infancy and Childhood, by Dr. J. H. Hess.

Discussed by Drs. Fenton B. Turck and A. Belcham Keyes.

Plague and Late Cholera Epidemic in the Philippine Islands.

Dr. Paul C. Freer, Superintendent of Laboratories of the Philippine Islands, spoke on this subject before the Chicago Medical Society February 8, 1905, and stated that the Philippine Islands had been visited by two cholera epidemics before American occupation—one in 1882, and the other in 1888—and in these years the mortality was very high. In Manila alone the records showed that there were as many as a thousand cases at one time, and proportionately a number in progress. Both of these epidemics were serious, and so far as could be discovered very little was done to check them. During both of these epidemics Manila had no water supply except in wells, and it was after the second epidemic, in 1888, that one of the former Governor-Generals gave a donation to start the Manila water supply works, which were completed afterwards. The third cholera epidemic occurred during the American occupation and about three years after the Americans landed on the islands.

Before speaking of the measures which were taken to limit the spread of the disease, Dr. Freer referred to the organizations in the Philippine Islands and the scant means at hand for limiting the epidemic. He also mentioned

those who took an active part in stamping out this epidemic. In order to secure complete co-operation the Philippine Commission established a Board of Health, a secretary, who was a Filipino, a chief health inspector and a sanitary engineer, who took charge of the engineering department, and a superintendent of laboratories. When the Board of Health was organized in 1901, it found itself practically without means. It had plenty of financial means, but it was without ambulances; it had no contagious disease hospital; it had no disinfecting wagons, and, in short, organization was very incomplete. Means of transportation were very poor, although these in times of epidemics were very important. The Board of Health undertook the work of equipping itself and preparing for future work. The city of Manila was divided into seven districts, each in charge of a medical officer, who were taken from the contract medical service. These officers, together with a corps of medical inspectors, began a system of house to house inspection. At this time the most serious disease confronting them was Bubonic plague. They were having a number of cases a day, although the number had diminished markedly since American occupation. Still it was serious, and a recrudescence of the epidemic was feared, and for this reason the energies of the Board of Health were devoted towards diminishing the plague epidemic. Many of the facilities acquired for controlling the plague epidemic were put to good use subsequently in dealing with cholera. Three weeks after the organization a large barracks was constructed which would hold twenty-five hundred people. This was for the purpose of isolating plague patients. When plague occurred in a house the patients were taken from it to the hospital, thus leaving the premises free for disinfection, etc. About December, 1901, three months after the plan was first discussed, there were constructed six barracks, which would accommodate a thousand people comfortably, and during the cholera epidemic they took in as

many as twenty-four hundred at one time. The Board of Health procured eight or nine ambulances and equipped itself as well as it could with disinfecting apparatus, etc. Whenever plague was suspected to exist in a certain house a member of the laboratory staff was called in for diagnosis, and if the case proved to be plague the patient was taken to the hospital, or, if he died, to the morgue, and a radical alteration of the house undertaken—either its destruction by fire, if beyond repair, or complete rebuilding. It became necessary to destroy and rebuild whole districts in the city, altering the houses, putting in new floors and walls, new windows, and in this way plague was eradicated completely from the districts where it was prevalent.

The main weapon against plague was the destruction of rats. The Board of Health undertook this work, and in the first month destroyed about two thousand rats, after which the number ran up to as much as twenty thousand a month. Fifty thousand rats were caught in the first three months. A very large number of rats were examined at the laboratory for the plague bacillus. Two hundred and seventy-two rats were found to be infected with plague, and had come from various houses, and one-half of the houses infected with these rats were found and treated in exactly the same way as those houses in which there were human beings infected with the disease. These houses were disinfected, even burnt down, if necessary, or altered. They managed to diminish the number of cases of plague by these measures, so that in March, 1902, there was not a case of plague in the city, nor had there been one for three weeks.

With reference to the epidemic of cholera, the Board of Health, before the confirmation of the diagnosis by culture in the first case or two of cholera, had taken measures as if the two cases were cholera. The patients were isolated in a contagious disease hospital, poor as it was. The next morning there were five more cases, the following day twenty more, and before the end of the month there were over a hundred and sixty, with two or three cases coming from one particular district in the city. The houses in districts in which cholera was most prevalent were burnt first and the property appraised afterward, as it was found that it would take at least two weeks to appraise the property. Two thousand people were taken out of the infected district and transported in wagons, ambulances, etc. By carrying out these measures there was very soon a great diminution in the number of cases, until finally the disease was entirely controlled and eventually wiped out.

The question of prophylaxis and of the use of serums having become a serious one, a serum laboratory had been established, and, under the Bureau of Laboratories, where formerly everything was imported from Japan, this laboratory now made all of the antitoxins and sera necessary for work in the tropics, including rinderpest serum, which was the largest item of all. The Board of Health had procured new ambulances, had enlarged its disinfecting corps, had perfected district organization, and the speaker

hoped that the next time there was a cholera epidemic they would be able to do more efficient work than was done in the last epidemic.

Discussion on the Remarks of Dr. Freer.

Dr. David J. Doherty said that the remarks of Dr. Freer were very interesting to him. The work Dr. Freer had done and was doing proved that Uncle Sam in the Philippines was trying to do as full justice there as he would here at home, discharging his duties toward these people, for whom he is trustee and guardian. Furthermore, the work that was being done there in regard to the causes of disease was not only for the benefit of this generation, but of unborn generations, and the Chicago Medical Society, like the American people, was proud of what was being done there. The members of the Society were proud because they had sent workers out there in the persons of Dr. Freer, Dr. Herzog and others.

Discussion on the Papers of Dr. Hess.

Dr. Fenton B. Turck: It would have been interesting to have had the bacteriological findings in the case reported to determine whether infection took place from the colon or small intestine.

The interesting work of Nicholls and Charlton, of Montreal, have shown invasion of the mesentery and kidney in rabbits by the colon bacillus. The bacteriemia results from the injury of the intestinal mucosa during the obstruction. The important lesson to be drawn from experimental and clinical work is that the most important etiological factor of intussusception is infection. The serious injury to the mucosa and submucosa allows the virulent bacteria to enter the circulation. Thus the condition no longer remain a local infection, namely, an infection within the bowel, but results in bacteriemia of general infection. The three points involved are (1) primary infection of the mucosa, (2) obstruction, with increased virulence of the bacteria in the bowel above the point of obstruction; (3) a general infection or bacteriemia that follows the condition of obstruction that has existed over twenty-four or forty-eight hours. I think it would be safer in very grave cases of intestinal obstruction to remove a large portion of the intestine above the point of obstruction so as to remove the infected area. Attempts at tearing the bowel apart and replacing the infected portion of the intestine is quite as, or more, dangerous than extensive resection. Where there is intussusception we can remove a large portion of the colon and long lengths of the intestine without materially interfering with metabolism.

Resection of the infected portion of the bowel would remove the danger of further infection. It would seem that the deduction drawn from the pathological findings and experimental work would be a more extensive removal of the bowel rather than to leave so much of the infected area in the abdomen, especially as there is a likelihood of a recurrence of the intussusception, such as reported late last year by Fenger Just, in *Hospitalstidende*, Copenhagen.

Dr. A. Belcham Keyes: I feel that this is a very important subject which Dr. Hess has so

ably brought before us. So far as I remember, this is the first case of intussusception I have heard personally reported before the Chicago Medical Society, and I think we may say that while intussusception is comparatively frequent it is comparatively infrequently met with by the general practitioner, hence my interest in this paper.

It would have been very interesting to know whether the infection followed the anesthetic by irritation and swallowing, or whether it was an infection that occurred from the bowel bacteria gaining access to the circulation, and in that way causing infection of the lung. It would have been also of great interest to have known whether there was any infection of the liver, and perhaps more so than to know of that of the lung, because of the directness of the portal of the circulation to that organ. As Dr. Turk has pointed out, I do not think the essayist has quite emphasized one point sufficiently, namely, that we have in these cases, in all probability, primarily an infection and infiltration of a circumscribed area of the muscularis of the intestine, and because of this part not functioning the intussusception.

The first case of this kind I saw was at the Cook County Hospital. The interne, who saw the case on admission to the hospital, failed in the diagnosis because of the fact that the condition is made so little of in our medical colleges and societies that one lacks the real interest due a subject of such importance.

I congratulate Dr. Hess on the manner in which he has presented his paper. While it is a dry, long drawn out subject, because we do not see enough of these cases, yet the paper is of inestimable value to the members of this Society.

At the regular meeting of the Chicago Medical Society, held Feb. 15, 1905, the following papers were read and discussed:

1. "Sajous on the Internal Secretions," being a review of his book, by Dr. W. F. Waugh.
2. "Gastroenterostomy," by Dr. Alex. Hugh Ferguson. See page 325.
3. "Observations on Infant Feeding," by Dr. Frank S. Churchill.

Discussed by Drs. Frank X. Walls, Lewis, Ferguson and Churchill.

4. "High Forceps, Pelvic Inlet Forceps, Indications and Relations to Version," by Dr. G. Schmauch.

Discussed by Drs. C. S. Bacon, C. J. Lewis and Schmauch.

Discussion on the Paper of Dr. Churchill.

Dr. Frank X. Walls: I can corroborate what Dr. Churchill has said regarding the value of whey in the modification of milk food for infants. I have been using whey for a number of years in the Diet Kitchen at the Northwestern University Dispensary, where we are feeding from twenty to forty babies a day. We begin feeding the young babies and the older babies who are put upon milk for the first time, with whey, and increase the composition of the food as fast as the circumstances will permit. Great improvement occurs in most of these cases though they were not doing well as ordinarily

fed. The class of cases, that comes to the Dispensary, is babies who are ill, and they do remarkably well with this modification of milk, so that I can heartily endorse what the essayist has said.

One point about his cases that seems to be rather unusual, is the large number of cases of sugar indigestion. Babies that are fed on mother's milk take from six to seven per cent of milk sugar. This is one of the constant ingredients in the mother's milk. It varies very little. We rarely observe breast-fed babies that suffer from sugar indigestion. The main principle in adopting a food for a baby is to imitate the maternal standard, and usually it is advised, in order to imitate this maternal standard closely, that lactose be added to the cow's milk to bring the per cent of sugar up to the human standard. It is suggested by the Doctor's reports, as well as by the observations of many others, that occasionally children become ill when given lactose and yet they are able to take other sugars. When they are not able to take lactose, they frequently can take dextrose in the form of beet or cane sugar, or maltose. Dr. Jacobi, whom everybody regards as the most prominent authority in this country on the subject of Pediatrics, advises in the modification of milk the use of dextrose rather than lactose. Most babies can thus be kept upon a per cent of carbohydrates which is equal to that in human milk by the addition of sugar other than lactose. This I would consider better practice than reducing the amount of lactose in the milk to the low point that some of these babies can digest. The carbohydrate is too valuable a food stuff to be withheld from the infant dietary.

In regard to whey feeding, I heartily concur in everything Dr. Churchill has said. I believe it is a step in the right direction in modifying cow's milk, and by this means we are getting nearer to the maternal idea.

Dr. Lewis: I would like to ask if most of the phosphorus is eliminated from the whey?

Dr. Ferguson: Did you make an examination of the mother's milk in all these cases in which the milk did not agree with the sugar?

Dr. Churchill (closing the discussion): With regard to the elimination of phosphorus, it is retained in the .65 per cent of salts in whey and is not eliminated from the whey.

With regard to an analysis of the milk of breast-fed babies, I will say that in cases of children fed on breast milk, who are not doing well, I always have the breast milk examined. If I can, I have a complete chemical examination made by an expert. If I cannot have this done, I have it done by Holt's method, which gives accurately the percentage of fat and approximately the proteids, and find it of great practical value.

I am glad that Dr. Walls spoke of the sugar. I have often thought about that. It is not exactly clear why some of these patients go to pieces when given 5 1-2 per cent milk sugar, when they will take sugar of human breast milk up to 7 per cent. I do not know why this should be so. However, the suggestion made by Dr. Walls is an excellent one; and it has occurred to me that in the researches of the

future we shall perhaps be able to "split" the sugars as we now "split" the proteids, and shall find some peculiarity about the sugar of human breast milk which will explain it.

Discussion on the Paper of Dr. Schmauch.

Dr. C. J. Lewis: I do not think any reference was made in the paper to any treatment other than mechanical in cases of marked contraction of the obstetric canal. In three cases of the contracted pelvis I have suggested that the mother drink nothing during the last three months of pregnancy but distilled water, and the children were born with well developed crania, small heads, and small bones generally. I made arrangements for one of the women to go to a hospital to have Caesarian section performed. This was about three and a half months before her time. She was put on distilled water, and through a misunderstanding of my directions she did not call me in time, or, rather, she had a premature labor, and failed to get to the hospital, and not being called at the beginning of labor, upon arriving, I found a midwife present and the child was born. In the passage of the head through the flattened canal, one of the parietal bones was crushed in. Delivery was complete, but the infant was small, weighing less than three pounds. I was of the opinion that in these three cases of small obstetric canals, that the distilled water diminishes the amount of bone formation. I do not know whether that has been the experience of others or not.

Dr. Charles S. Bacon: This paper is of so much importance that I suppose many will take part in the discussion, and at this late hour it would be useless for me to attempt to cover the whole field of the paper.

There were a number of important points brought out concerning which I would like to speak if I had time. For example, the matter of making an attempt to press the head into the pelvis (Hofmeier method) before undertaking forceps is extremely valuable; and the preparation of the cervix by incisions before attempting the operation. But without going further into those valuable points on which we should agree, I shall confine what I have to say to one or two points, in which there may be a difference of opinion.

In regard to definitions it would be desirable to be a little more exact as regards phraseology. Why not decide to say definitely that high forceps is the application of forceps to the head before its greatest circumference, that is, with the ordinary presentation the suboccipito-frontal circumference, has passed the pelvic inlet or superior strait? Then we know exactly what we are talking about; otherwise there is uncertainty as to what is exactly meant by the use of the term engagement of the head, and so on. We do not all agree as to what we mean by the term engagement of the head. If the largest circumference has passed the pelvic inlet, the head is then in the cavity or excavation, and we have no longer high forceps, but before that the head to a certain extent is in the inlet, that is, the most advanced portion is a certain distance below the inlet, and still the head may be

in some cases quite movable, but in others not so. But in all the cases, until the large circumference has passed, the head can be pushed back out of the pelvis if you insert the hand alongside of the head to introduce the blade of the forceps. The fact is that the head can be pushed up, if its largest part has not passed through, so there is not so much difference between the use of forceps when the head is beginning to enter the inlet, and when it is freely movable above. The forceps should not be applied if the head is still movable. The reason the essayist gives why forceps should not be applied before the head has begun to enter, is that it is not properly moulded. The amount of moulding differs a great deal, because of the presentation in any particular case, and there are a number of other factors to be considered, and I am not so sure that moulding at this point is so important.

Let us consider the method of catching the head before it enters the inlet. The forceps should be, above everything else, applied in such a way that they will not slip. If the head is very much flexed, and labor has been going on for some time, and the forceps are applied transversely, one blade will go over the occiput which now will project but little, and the other blade will catch lightly over the forehead. It is absolutely impossible in cases of this kind to get the other blade clear over the face, so as to get a hold that will not slip. There may not be a disadvantage in having the head but slightly moulded, if we are to apply forceps transversely, as suggested. Generally the proper way to apply forceps, is to grasp the head obliquely so that they will not slip. It is the worst mistake we can make to apply them so that they will slip off from the forehead. I believe that if the head has begun to descend into the pelvis, it may be sometimes even necessary to push it back out of the pelvis, so that the blade can be applied up above the inlet. This seems to me to be a most important point in the technique of this operation. I believe also that the operation should not be confined to the indication—danger to the mother. It can also be used where there is imminent danger to the child if the technique is properly carried out, and the facilities are good, and the proper conditions are present.

Dr. Schmauch (closing the discussion): The difference between Dr. Bacon and myself is that he applies high forceps in cases of comparatively movable head. Even when the head is somewhat engaged in the pelvic inlet, if you apply forceps it will be pushed upwards; but there is a vast difference between a movable head that allows us to perform version and a head moved by the inserted blade of the forceps, as hereby head and cervix are pushed up. That is what I wanted to point out.

In regard to the remarks of the gentleman who spoke last (Dr. Lewis), I want to say the treatment he mentioned has been used for about eight or ten years. I believe it was first described by Trochownite, in Hamburg, who advised that pregnant women advanced in labor be put on a certain diet. He gave and recommended, however, many things besides the ad-

ministration of distilled water; and there is no doubt that with this treatment labor in contracted pelvis is facilitated; the bones of the child get smaller, are more compressible, and the children are more easily born.

At a meeting of the Chicago Medical Society, held Feb. 22nd, with Dr. Wm. A. Evans in the chair, the following papers were read and discussed:

1. "Tricuspid Obstruction," by Dr. Joseph M. Patton. See page 324.

Discussed by Drs. C. B. King, S. Eisentaedt, and Dr. Patton.

2. "The Dunbar Antitoxin Method of Treating Hay Fever," by Dr. Otto J. Stein. See page 320.

Discussed by Dr. Casselberry.

3. "The Elements of Diagnosis in Cutaneous Syphilis," by Dr. E. A. Fischkin.

Discussion on Dr. Stein's Paper.

Dr. William E. Casselberry: Dr. Dunbar has attempted to solve the problem of the etiology and treatment of hay fever on a strictly scientific basis. He has succeeded in establishing certain facts with respect to the toxin from pollen of grasses causing this disease, if he has not done more, and from the toxin has created an anti-toxin which opposes that particular toxin; clinical experience indicates that it will meet the symptoms in a certain number of cases but not all of so-called hay fever. One of Dunbar's deductions, I think, is scarcely warranted. Based on the fact that his artificially isolated toxin will establish symptoms of irritation in almost all classes of hay fever subjects, he assumes that the actual toxins of grasses, rag weed, the golden rod, the cottonwood tree, the rocky mountain daisy, etc., are the same or so similar in their effects that his antitoxin should be of service. Now, under the name hay fever, are grouped several similar but not identical etiologic types of the disease. Some of them, with fuller knowledge, may even come to be regarded as separate diseases.

We have various forms of early hay fever from different grasses, rose cold, cottonwood fever and autumnal catarrh, which later is the regular hay fever of this district, commencing the middle of August and due to ambrosia, so-lidago, etc. A similar state is caused in subjects of hyperaesthetic rhinitis by the aroma from horses, feathers, paints, etc. It is not reasonable to suppose, therefore, that all these different types which occur in those who have nasal hyperesthesia, and which are grouped under the common name of hay fever, can be successfully treated by means of the antitoxin of Dunbar. Clinical observations tend to confirm this judgment. Mayer, Semon and McBride's cases like those of the essayist point to the remedy as being distinctly beneficial in a majority of cases, but inactive in others, and positively aggravating in a few (Bulette, cottonwood fever). It is our duty, therefore, to endeavor to find out in which classes it is useful in order to embrace it as an addition to our armamentarium.

There is one fallacy which must not be overlooked in estimating clinical results from the Dunbar antitoxine and that is, hay fever pa-

tients, even confirmed subjects of the disease have intervals of decided relief independently of any medication they may happen to use. In Chicago intervals of relief and exacerbation are governed by the direction of the wind. Strong east wind, pure from the lake, means a period of relief for hay fever patients, while southwest winds, hot and loaded with impurities provoke the worst symptoms.

Then, too, we must not overlook the fallacy, the mental factor, which pertains to all new remedies. Many physicians are themselves sufferers from hay fever. They especially should test this antitoxine upon themselves and record accurately both the exact type and nature of their hay fever and the effects of the remedy, avoiding at the time other remedies.

CHICAGO LARYNGOLOGICAL AND CLIMATOLOGICAL ASSOCIATION.

A regular meeting was held February 7, 1905, with Dr. John Edwin Rhodes in the chair.

Dr. A. H. Andrews exhibited a patient and made the following remarks:

The patient I wish to show you is a young man, nineteen years of age, who has had a defect of speech almost from infancy, that is, from the time he first learned to talk. His history is this: Mother died of consumption ten years ago; father still living and in good health; has an elder brother and elder sister, both in good health. Patient has had the ordinary infantile diseases; but does not know that he has ever had any special trouble with his ears, nose or throat. He has been treated for this defect in his speech without improvement. His occupation is that of billing clerk.

I would like you to hear him talk in order to get the quality of his tones, and then, if any of you care to examine him and see if the cause of the defect of speech can be found, you are invited to do so, and to offer any suggestions as to its improvement. I do not know of anything that will bring out his tones better than to have him count up to seven or eight. (This the patient did at the request of Dr. Andrews.)

Dr. George E. Shambaugh: I would like to ask Dr. Andrews if he has found any anatomical defects in this case?

Dr. Andrews: I find anatomical peculiarities, but whether they are defects or not, is open to question. The peculiarities are an unusually long antero-posterior measurement of the post-nasal space. From the soft palate at rest back to the posterior pharyngeal wall is a greater distance than we ordinarily see.

Dr. Joseph C. Beck: About a year and a half ago I presented a young woman to this society who had a very similar condition. Some of you may remember her. At that time I went over the subject of defects of speech, particularly of this type, called rhinolalia. Cohen, of Vienna, and Makuen, of Philadelphia, have very clearly described such cases. As a report of my case has been published, I will not go into a detailed description of it, except to remark that it is an undevelopment of the muscles of the palate from early childhood, or rather an encouragement of

baby talk, in plain language, the child not being allowed to develop the palatal muscles, consequently there is an imperfect application of the tongue to the teeth and proper part of the palate. I was not able to develop these muscles in my case until I resorted to a surgical procedure, which consisted of the injection of paraffin into the posterior pharyngeal wall in such a manner as to bring out the posterior pharyngeal wall in direct line with the soft palate. When the patient would say "Ah," or attempt to swallow or speak, she would shut off a large space that is present, as in this case. Following the injections, as soon as the paraffin hardened, she could say the word plate distinctly. She wore an artificial velum, but with imperfect success. I stated at the time I reported this case that the treatment in these cases of injections of paraffin or any appliance was not satisfactory; that these cases required an educational method of treatment. If Dr. Andrews will take the time, as I did with my patient, of taking the tongue of the patient and placing it where it ought to be placed, with proper breathing and gymnastic exercise to develop the muscles, he may be able to overcome the defect in speech of his patient. Electricity has but very little effect in these cases. There is no institution, I am sorry to say, in this country or any particular teachers who will undertake to educate these patients in a way that they should be educated.

Dr. Norval H. Pierce: I would like to ask Dr. Beck if gravity had any effect on the paraffin injections where he first put them, or did they have a tendency to gravitate down into the pharynx?

Dr. Beck: The paraffin masses have sagged down, so that there is a tendency for the patient to gag. The muscles have developed sufficiently, so that they retract as they do not in this case. One can see the middle mass. Understand, I made three distinct injections, two laterally, and one centrally. The central mass could be seen, something like you see of the anterior body of the vertebra prominence. However, in my case speech has been improved, and I do not think sagging has anything to do with the result.

Dr. Elmer L. Kenyon: It seems to me that, so far as this patient has spoken tonight, the only difficulty is the nasal quality of his speech. So far I have not noticed any defect in his enunciation, either of the vowels or consonants. As we look into the throat, we notice that there is very little movement of the soft palate. It is true, as I have had reason to learn by experience, that in some patients the soft palate in speaking does not approximate closely to the posterior wall, and yet the speech is not markedly nasal. That seems almost impossible, and yet it is true. In other words, with a clear space admitting air into the nose, speech is not distinctly nasal in one particular instance which I have in mind. I should think the thing to do would be to train the patient to grasp the feeling which one has, or may have, when the soft palate approximates the posterior wall. It would seem to me well to press the soft palate gently up against the posterior wall until the patient himself appreciates the feeling of the muscles as they go

against the posterior wall; then, having appreciated that feeling, he himself can attempt to produce those same movements without the aid of any muscular pressure against the soft palate. That would be one thing to do, it would seem to me, and another thing would be to cause him to direct his speech outward through the mouth, and at the same time downwards in the throat. That is as near as I can come to expressing the idea I have in mind. Many patients, who talk in a nasal tone will almost instantly, if you direct them to talk low in the throat, cease their nasal quality. So the two things to be done would be to direct speech downwards in the throat, and outwards through the mouth, and, if possible, to instruct the patient how to move the soft palate. Whether that can be done in this instance, I am not able to say.

Dr. Joseph C. Beck: The last speaker mentioned training in these cases; but this method of putting a finger in the mouth or, at least, making the patient appreciate the feeling, is impossible in speaking with any foreign substance in the mouth. That has been tried by many in applying instruments back of the teeth, so that the patient would not be interfered with by having anything in his mouth. There is a method of making the patient feel. If you will take and put a patient's finger on top of your nose and vibrate tones through the nasal bone, and also along the larynx and the chest, etc., in contact with the air, if you have a normal individual who speaks he will grasp that. That is what is called the direct method of attack in speech defects.

Dr. Pierce: I would like to know whether this patient ever throws fluids up into his nostrils accidentally.

Dr. Andrews: Sometimes he does, but it is very seldom.

Dr. Andrews (closing): There have been a number of points called to mind which I did not mention in reporting the case. One is that the patient is not conscious of his defect except when he takes cold, and then he realizes that his voice has a nasal tone. I have made some experiments with this young man, and among them I passed a string back through the nostril, brought it out at the mouth, tied a pledget of cotton to the string, and drew it into the naso-pharynx. While this was present the improvement in his voice was remarkable.

I have considered the advisability of injecting paraffin, but knowing that paraffin is much easier to inject than to remove, I have hesitated until I should be thoroughly convinced that it was the proper method to pursue.

I have seen a number of cases of paralysis of the soft palate following diphtheria in which the tone was very similar to this young man's, and, indeed, in order to confirm the result of my experiments on him, I introduced a retractor into my own mouth, drew forward the soft palate, and then used my voice, with results very similar to what we have in this case. So I think there is no question as to the real cause of his trouble; but the greatest question is how to relieve it. I appreciate the suggestions

which have been made. Many of them had not occurred to me, and I wish to profit by them in the treatment of this young man.

MASTODITIS IN TYPHOID PATIENTS.

By Dr. P. J. H. Farrell.

The following brief history of cases that I have operated for mastoid trouble that followed typhoid fever was particularly interesting for two reasons: First, the patients were weak, emaciated and exhausted from a long siege of typhoid fever, and therefore not in good condition to take an anesthetic or undergo an operation; secondly, the evidence of the rapid and extensive destruction of tissue was unusual in acute cases.

Case 1. Male, 26 years old; entered hospital Jan. 3, 1904, suffering from typhoid fever. Ran a severe course, giving all signs of typhoid; typical fever curve, rose spots, spleen, widal, diazo, blood culture, showing typhoid bacilli. From onset complained of severe pains in the head. Jan. 19th, sixteen days after admission, complained of an earache, and during that day. Membrana tympani ruptured spontaneously, considerable pus discharging. Pain somewhat relieved and general condition better. Feb. 15th, began to complain of pain in left ear. Discharge from this ear still present, and at same time temperature which had been at about 99°, jumped to 102°, pain increased in intensity, and on the 19th it was noticed that there was a tender red swelling behind the left ear, pitting on pressure and giving a slight sense of fluctuation. Pressure caused severe pain and some increase of discharge from the ear.

On examination he was found to be stupid, apathetic, and apparently suffering intense pain in region of left mastoid.

Operation next morning. Incision revealed a subperiosteal abscess containing about one half ounce of pus and necrotic bone. No pain after operation. Patient became brighter. Temperature normal on evening of third day. Was able to be up on the fourth day. Recovery uneventful.

Case 2. School boy, thirteen years of age, entered hospital March 10, 1904. Has had typhoid for three weeks; trouble began with a severe frontal headache and a peculiar feeling of fulness in right ear; following day headache had disappeared, but he suffered from a severe earache. Touching ear or lying on right side caused him severe pain. Swelling and redness behind ear. On the third day there was marked swelling, redness and tenderness over right mastoid, and pain was localized in this region. Pain was so intense as to prevent sleep. A purulent discharge from the ear appeared on the fourth day, lasting two days and then stopped. With the cessation of the discharge the pain, swelling and tenderness in mastoid region increased. This condition lasted about two weeks, during which time pain was almost constant. The extreme tenderness prevented putting that side of the head to the pillow, and the swelling became very marked. He was unable to sleep; he became very weak.

Examination: 1. General. Fairly well developed boy of thirteen years; markedly emaciated. Face thin, drawn and pale; eyes sunken; expression of pain. Temperature, 101.6°; pulse rapid, 116, small, or low tension. Respiration 28. Lies on left side. Complains of pain almost continually.

Right ear red, swollen, and stands out prominently. Over mastoid marked redness, swelling and edema. Pressure over any part of right side of head caused severe pain. Over mastoid region pain is intense. Membrana tympani rather pale. Small opening just below center. Some thick pus adherent to meatal walls.

Small amount of pus beneath periosteum. On sponging out, five small fistulous openings appear, from which considerable yellow pus escapes. Outer shell of bone chiseled off. Necrotic bone gouged out until antrum was reached. Considerable pus and necrotic bone removed from antrum. All detritus and pus infiltrated cells curetted out until walls were smooth and hard.

Second day after operation temperature normal. Third day patient was up and feeling well. Recovery uneventful.

Case 3. Clerk, aged thirty, entered hospital March 14, 1904. Diagnosis, typhoid fever.

History: Patient states that he had been suffering from a severe cold for several weeks prior to admission. Seven days ago began to have severe earache, pain all over left side of head. Three days later pain became more intense and localized in region of left mastoid. About this time noticed a discharge from left ear. Pain became so severe that he was unable to sleep. No discharge.

Examination: Fairly well developed man of thirty, nervous, excitable. Temperature 100.4°; pulse 84, good tension. Face slightly flushed; left ear red and swollen; stands out from head prominently. Marked swelling and edema over left mastoid. Pressure especially over apex causes intense pain. External meatus filled with thick, curdy pus. Membrana tympani shows a small perforation just below its center.

No external evidence of suppuration. Bone was hard and sclerosed until down to the antrum. Here bone was soft and necrosed, antrum contained considerable thick muco-pus. Mastoid cells revealed a similar substance. This was cleaned out and radical operation done. Relief immediate and temperature normal next day; patient up on third day.

Case 4. Female, single, aged 18; seamstress. Entered hospital March 3, 1904. Diagnosis, typhoid fever.

Present illness commenced five weeks ago with usual symptoms. A week ago had a severe earache, the pain being intense for two days, at which time a purulent discharge came from right ear, the pain diminishing. She has more or less pain in this ear to present time. Two days ago pain became marked over right mastoid, and in a short time the ear had become much swollen—red, tender. Pain increased, preventing rest or sleep.

Patient is a well-developed young woman. Lies on left side; seems to be suffering intensely.

Slightest touch on any part of the right side of head causes her to cry out with pain. The pain prevents sleep, and she has been kept under the influence of morphine. Right ear is red and swollen, and stands out prominently. Mastoid process apparently obliterated by large boggy tumor, which extends down into neck and back over occipital region—some fluctuation.

Temperature, 102 degrees; pulse, 104; respiration, 26.

Incision over the tumor evacuated a large amount of pus from beneath the superficial tissues. Periosteum retracted and cavity sponged out; shows three small fistulous openings, from which considerable pus came forth. Necrosed bone gouged out and mastoid cells and antrum found full of pus. On the second day the temperature was normal.

Case 3. Male clerk, aged 33. Entered hospital March 14, 1904. Diagnosis, typhoid fever. Two days ago had severe earache, which was not relieved by local applications. In a short time the pain became localized to region of mastoid, and tissues over the process became red, swollen and intensely tender to pressure. Pain so severe that he was unable to sleep. Condition became progressively worse. He had severe chill.

No previous ear trouble except slight deafness in left ear.

Examination: Over left mastoid and for some distance around it tissues are red, swollen and pressure over the region causes severe pain. Tenderness on pressure over upper part of sterno-mastoid muscle and in front of external meatus. Membrana tympani injected and bulging.

Patient suffering intensely; pressure on any part of the left side of head caused intense pain. Temperature, 102 degrees; pulse, 92; full and soft; respirations, 36.

Operation: Usual mastoid incision. No external sign of pus. Bone chiseled down about 8 mm., where bone became soft and pus welled out. Softened and necrotic bone curetted out until antrum was reached. Upper portion of bony meatal wall chiseled out. All purulent material and diseased bone curetted out.

After operation patient was perfectly comfortable. On second day temperature had become normal, and patient was allowed to get out of bed on third day. Recovery uneventful.

Discussion.

Dr. Henry L. Wagner asked whether the pus was examined in these cases.

Dr. Farrell replied that in several of them there was a history of streptococci, and in two of the cases, so far as he could recall, the pus was examined. In the others he did not think there was any examination of the pus made.

Dr. Henry L. Wagner, of San Francisco, California: I have been interested in this paper, as I have seen various similar cases in Pittsburg at the time I was there with Dr. Jackson, who had made similar observations also into the occurrence of acute laryngitis, and it is certainly of the utmost importance to know whether the typhoid germ has been found or not, or whether it is a mixed infection. It is interesting to all of us because it seems that

these cases occur in epidemics. I might say in certain years. In San Francisco I do not recall ever having seen the number of cases which have been observed in Pittsburg, so it must have been a special epidemic due to certain germs that were found in the pus.

Dr. A. H. Andrews: I may be affected by that peculiar form of obliquity which is supposed to enable the average specialist to trace the etiology of all diseases to his particular department. But from the reading of the report of these cases it would seem to me possible that some of them may have been ear trouble entirely and that typhoid had nothing to do with it unless the bacteriological and other tests were made and gave unmistakable evidence of typhoid. I have seen a number of cases in which the family physician had made a diagnosis of typhoid, and when mastoid symptoms developed the otologist was thoroughly convinced that it had been otitis from the beginning, and typhoid had absolutely nothing to do with it. I am wondering if some of these cases may not belong to the same class. I think that is what Dr. Wagner had in mind.

Dr. T. Girdon-Wilson. I have had a little experience with some typhoid patients, and I would like to take this opportunity to say a word or two in reference to the matter.

Some years ago I took great interest in otitis watched the cases carefully, made a bacteriological examination of the blood and of the discharges from the middle ear, and in no case did I find any trace of the typhoid bacillus in the ear discharge, nor in the mastoid discharge. Not only that, but very often when I examined the throat in undoubted cases of typhoid I could find no trace of the typhoid bacillus; but very constantly I found the streptococcus and the staphylococcus. That is extremely interesting, because the percentage of cases in which we find throat troubles in typhoid is very great; but the percentage of cases in which we find ear trouble in typhoid is very small. If the statistics were collected I do not believe that the percentage would be more than two. Of 350 cases we examined only one case was found of mastoid disease complicating typhoid. I do not think Dr. Farrell is so wrong; I think he is all right in the majority of cases, and I do not think much, if any, stress can be laid on the fact that he did not find typhoid bacillus in the discharges, because although the typhoid bacillus has been found, it is extremely rare.

Dr. Norval H. Pierce: I believe that it is a valuable method of investigation to consider the various types of ear disease as they occur in various diseases. In fact, I think that there is to be in the future advance along these lines; that is to say, the character of the middle ear disease, suppurations, and mastoid disease, as they occur as a cause of staphylococcus infection, as a result of streptococcus infection, the influenza bacillus, the bacillus lanceolatus, etc., and as these complications occur in other diseases—typhoid fever and pneumonia, for instance. We have already gained a great deal of valuable clinical knowledge in the study of cases which arise in the course of or after an

attack of pneumonia. True, we do not frequently find pure cultures of the pneumonia bacillus in mastoid disease occurring in the course of pneumonia, or some time afterwards. We find usually the streptococcus; but these cases almost invariably have many peculiar characteristics which are very misleading unless we know that such cases possess them. For instance, I have not infrequently seen cases of mastoid disease coming on a month after a pneumonia infection. The ear discharge has dried up. There is very little fever, very little swelling, if any, externally, and very little tenderness, but when the cortex of the bone was taken away the mastoid was found to be entirely necrotic. One case I well remember, in which the inner table of the skull was necrotic, exposing the dura to the middle fossa. So I think it is well to consider these cases as they occur in typhoid fever, and surely the diseases of the middle ear as they occur in typhoid have many peculiarities. Not only are the affections of the middle ear peculiar, whether or not produced by the typhoid bacillus per se, but the affections of the internal ear occurring in typhoid are peculiar and interesting. They have peculiar prognoses; they have peculiar courses, and I see no reason why we should not, as the essayist has done, report these cases as they occur, and endeavor to, by closely studying them, adduce therefrom most valuable knowledge.

Dr. Farrell (closing): In reply to the doubt expressed by Dr. Andrews as to whether these were really typhoid cases, the history sheets and charts show that all of these cases ran the typical fever curve, rose spots on the abdomen, and Widal, Diazo, and blood culture showing typhoid bacilli, so that there was no question about the accuracy of the diagnosis. To begin with, they were not my typhoid cases; they were my mastoid cases, and came to me as such for operation. Their histories were carefully taken, and there can be no question about the diagnosis being accurate and complete as to typhoid.

These cases showed a more complete and destructive course than we generally meet in acute cases. In all of the cases the necrosis was very extensive.

The rapid convalescence from typhoid was most marked in all cases operated upon.

Abstract of Dr. Freer's paper: "The Maxillary Antrum; the Removal of the Greater part of Its Nasal Wall for Empyema."

Dr. O. T. Freer read a paper on "The Maxillary Antrum; the Removal of the Greater Part of Its Nasal Wall for Empyema" (to appear in full in the "Laryngoscope," March, 1905), and presented a patient upon whom he had done the operation.

The author referred to the work done by Holbrook Curtis in this direction, and to twelve cases reported by Claoue and seven reported by Escat. The operations in nine of Claoue's cases and in all of Escat's resulted in perfect recoveries. The imperfect relief and annoyance to patient and surgeon given by alveolar drainage was considered, and the reluctance of patients

to consent to the Radical Caldwell-Luc procedure, as this requires general anaesthesia and ablation of most of the facial wall. Compared to this severer method Dr. Freer gave as the advantages of the operation he described: Operation under cocaine anaesthesia instead of narcosis; the avoidance or resection of the facial wall of the antrum; the free access in spite of this given to the interior of the antrum for inspection and curettage and the perfect drainage and ventilation of the antrum obtained. While admitting that the radical operation would still be required for the severest cases, the author contended that in the great majority the nearly complete removal of the nasal wall would suffice, as it offered the advantages of the radical operation without its usually needless removal of the facial wall.

Dr. Freer's patient had had empyema of the right antrum of Highmore, with intense fetid purulent discharge for a year. Diagnosis made by transillumination and washing through a Myles trocar, which had been made to pierce the antrum in the inferior meatus.

The operation was performed as follows: Local anaesthesia was produced by the application with a minute swab of powdered cocaine. The anterior two-thirds of the right inferior turbinal were resected with Gruenwald's scissors and an angular knife. A long, straight trephine was then applied to the outer wall of the nose in the inferior meatus, its shank pressing the cutaneous septum, and with it the nasal tip, strongly over to the left, so that the trephine crossed the inferior meatus at an angle of about forty-five degrees. After perforating the nasal wall of the antrum with the trephine in the place indicated a long barrel-shaped bur was placed in the hole made and the greater part of the nasal wall of the antrum cut away. The opening was still further enlarged with Rhodes' large punch forceps. The window so made in the nasal wall of the antrum extended from above the lower border of the middle turbinated body in the middle meatus downwards to the nasal floor, the base of the nasal wall of the antrum being trimmed off to the very bottom with the bur. Behind, the opening extended to the perpendicular plate of the palate bone; in front, to within five-eighths of an inch of the apertura pyramiformis. Large amounts of foul coagulated pus escaped, and all of the interior antrum could be inspected excepting the inner surface of its facial wall. Cruetage was not needed, but could have been thoroughly performed. The hemorrhage was insignificant.

The interior of the antrum was palpated with the little finger. The cavity was firmly packed with a long strip of lint impregnated with subnitrate of bismuth. Complete recovery ensued in about three weeks. Dr. Freer warned of the danger from arterial hemorrhage if the posterior wall of the antrum lying in front of the sphenomaxillary fossa were pierced, or if the palate bones were included in the resection.

The success of the operation depends on the making of a large opening, and especially upon the complete cutting away with the bur of the

ridge between the floor of the nose and that of the antrum, as only a large opening will remain permanent.

Discussion.

Dr. Joseph C. Beck: I reported a case about a year ago before the Society, in which I did a similar operation to the one described by Dr. Freer, with a very good primary result; but it was only a question of two months, when a fulminant osteoperiostitis developed, which required a more extensive operation than the Caldwell-Luc, namely, complete ablation of the anterior wall of the maxillary sinus, with thorough cruettement of the necrotic area. My patient, a physician, was able to clean his antrum, and he obtained, by means of astringent solutions, nitrate of silver, and other mild solutions, a completely dry antrum. I cannot explain the cause of the acute osteoperiostitis; but I wish to say that I do not think it is wise to give patients instruments to enter their nose. Even though my patient was a physician, I have my suspicion about introducing canulas into the antrum.

I would like to ask Dr. Freer if, in going over the literature of the subject, he did not come across an article by Sieberman, eight years ago, in which he demonstrated an intra-nasal method of operating on the antrum of Highmore without going through the canine fossa, through the nose, with his finger pressing firmly through the lateral wall, and making a large opening above the inferior turbinated body. We know from an anatomical standpoint that such an operation is attended with difficulty, but when cases are reported by such a man, in which it was done, we must consider it with some respect. I would like to know what criticism he has to offer of that method.

Another thing I would like to inquire about is the effect of this operation on the tear duct in his case. My patient had a troublesome epiphora for quite a while, but this subsequently disappeared.

Dr. E. Fletcher Ingals: Some years ago I opened the antrum in this way, occasionally with a trephine; but I did not enlarge the opening, and it closed very promptly. But the trephine seemed to be a very unsatisfactory instrument for doing the operation. The antrum can be opened with the Krause more easily, quickly and more satisfactorily. Once in trying to open a very small antrum I passed a Krause trocar into the orbit, but fortunately it did no harm. I agree with the author of the paper that the method described is in many cases preferable to the more severe operations, and I know from personal experience that it is easy to curette the antrum, or a considerable part of it, through an opening in the inferior meatus, although one cannot do it accurately, and it would not be safe to make a vigorous curettement. I have a patient whose antrum I have opened in this way two or three times, making an opening nearly a centimeter in diameter in one direction, but perhaps not quite so large in the other, and each time in about three weeks the opening would entirely close. Yesterday I opened an antrum through the inferior

meatus after carefully anaesthetizing the inferior turbinated and the inferior meatus and using adrenalin freely. With scissors I cut through one-half to three-quarters of an inch of the attached border of the anterior portion of the inferior turbinated body, then passed the loop of a snare under this piece, with the tube of the snare above, and I found no difficulty in cutting it off quickly. I then pushed a small trocar through the antral wall three or four times; then with Grunwald's forceps had no difficulty in trimming out the edges of the opening until I had removed all of that portion of the wall below the attachment of the inferior turbinated bone.

Recently I have made a small trocar for opening the antrum. It is 8 cm in length, 3.5 mm in external diameter, and is formed on the segment of a circle with a radius of 6.5 cm. The proximal end of the canula accurately fits my aspirating syringe. I designed it not only for exploratory puncture and aspiration, but also for making a temporary opening in acute cases that would remain patent four or five days. In such cases I design to run a pilot through the canula, then withdraw the canula and pass in the pilot truss that I had made for this frontal sinus, which would make an opening 6 mm in diameter. I do not like to use the large Krause trocar in acute cases.

Dr. Charles M. Robertson: I was glad to hear Dr. Freer read his paper on this subject, because it coincides with my idea about diseases of the antrum. Where there is a demonstrable necrotic tissue I think the radical operation must be done; and if we want to dissect up the anterior surface of the superior maxilla, the operation as performed by Dr. Freer is right in line with it, and does away with a good deal of the bother after we get into the antrum. I have done this operation. I do not think it makes any difference whether we use a trocar, a chisel, or a bur to open the antrum. It is largely a matter of convenience and taste as to what instrument one may use.

Cutting of the lacrimal duct you cannot avoid sometimes. If you go as far forward as the junction of the anterior third of the lower turbinate you cut it off, for that is where it enters the nostril. If you do not wish to sacrifice the duct, by putting a silver probe down the duct you can avoid it; you can cut behind it. I have done that. There is no advantage in saving the duct, because if there is a little epiphora from that cause it soon passes away, or you can introduce a seton into the lacrimal duct down into the nostril. I have done that.

As to maxillary empyema, the greater per cent of cases I have seen has been those in which there has been hypertrophy of the anterior end of the middle turbinate, and it has been so marked that I have come to believe that in a great many cases this is the real cause of its continuance, so that it has become a habit with me to remove the anterior end of the middle turbinate where such a condition exists. That is a primary step always with me in the treatment of maxillary empyema, and after this is removed I wash out the antrum.

as I believe we ought to do, by means of a trocar with normal salt solution, or some solution that we think is better, and if that does not ameliorate the case this operation is the next step. If that does not answer we should do a more radical operation.

Dr. J. Holinger: The radical operation is advised only in chronic cases, which are refractory to every other form of treatment. In those the nasal wall of the antrum is usually soft and brittle in the area of the middle meatus. We therefore do not need such strong instruments as a chisel or a trephine, but the little finger will easily break down the wall. The flaps of the edge of the opening may then be cut away with Hartmann's or Rhode's forceps, as suggested by Dr. Freer. Liebermann uses for diagnostic as well as therapeutic purposes a wide blunt canula, which is made of copper. I never had any difficulty in introducing this flexible canula through the wall into the antrum.

Dr. A. H. Andrews: I have never undertaken to push my little finger through the wall between the antrum and the nose. From the dissections which I have made it would seem to me exceedingly difficult in the inferior meatus, but in the middle meatus quite easy. I would like to know if some of the gentlemen in their remarks had not in mind the middle meatus instead of the inferior, when they spoke of the ease with which they could go through the wall.

Another point: It has seemed to be that the tears constantly flowing down into the cavity when an opening has been made through the inferior meatus might cause complications. When Dr. Price Brown was in the city last year he said it was his impression that the tears sometimes poured into this cavity and complicated affairs, and, as I remember his paper, he did not favor this method of operating.

Dr. Ingals: With reference to the remarks of Dr. Holinger concerning the need of no instruments I will say that I operated on a case in which no one could have gotten the little finger through unless it was made of steel. It was a case in which it was with great difficulty that I could get through with a Krause trocar, and if I had not used it I do not believe I could have gone through the wall at all.

Dr. Joseph C. Beck: I think I said distinctly in my previous remarks that Siebermann went through the middle meatus, and not through the inferior meatus.

Dr. T. Girdon Wilson: I would like to ask Dr. Freer how far the alveolar gutter lies below the level of the nose in his case?

In some cases I have seen the gutter extend from ten to fifteen millimeters below the level of the nose. If he went high up he would have a tremendous depth to drain. I have seen several of these cases operated on, and the difference is that Dr. Freer has been much more radical in his method of operation than has been the case of any I have come across.

Dr. Geo. E. Shambaugh: It will often be found a very difficult matter to get into the antrum with a straight burr and make the large opening one often wishes to have. A curved instrument can be used to much greater advantage in most cases.

As for the opening in the middle meatus, this might be required, especially in acute cases, with retention. There is an area fully one-half an inch in diameter located in the region of the ostium maxillare, where, with the exception of delicate bridges of bone, the antrum is separated from the nose only by the mucous membranes. It is in this region that the finger can be pushed through the antrum. Instruments are devised which can be used to tear a large opening into the antrum very readily in the area of this so-called nasal fontanelle.

In case of chronic empyema involving the antrum it frequently happens that the frontal sinus is similarly involved, and in chronic empyema of the frontal sinus it must be very rare indeed when the antrum is not simultaneously filled with pus. The reason for this is an anatomical one. Both of these sinuses open into the infundibulum, and pus from the frontal sinus must of necessity drain into the antrum while the patient is in the upright posture, and pus from the antrum will often flow into the frontal sinus when the horizontal posture is assumed. In cases of chronic empyema of the antrum, as well as of the frontal sinus, it often requires the exercise of very careful judgment to determine what is the best method of treating the particular case. I believe that errors are made often in attempting too radical measures, as in attempting to do too little. Often where the absence of a tooth permits an opening through the alveolus will often be the best means for giving the desired relief. The error is too often made in assuming that the most radical measures offer the best solution for every case. Many cases are best taken care of where free drainage into the nose is established, and the ideal method would be to resect the anterior half of the inferior turbinated body, and to make such a large opening through the inferior meatus as to permit not only the easy irrigation of the cavity, but the emptying of the sinus through the effort of blowing the nose.

Many cases are subject to radical operations where simpler methods would give a more satisfactory result. I recall at this moment a man who consulted me several years ago, and where an empyema of the frontal sinus and the antrum on one side were diagnosed. The patient was suffering a good deal from retention of secretion, due to obstruction in the middle meatus. The middle turbinated was resected and the sinuses irrigated. All unpleasant symptoms cleared up except a slight discharge from the nose. I advised against a radical operation, believing that the patient was quite as well off left alone. The patient was going abroad some time later, and I advised that he consult Killian and get his opinion as to whether he considered the radical operation indicated in his case. Killian operated on him at once, and when the patient returned he was very much pleased that he had been cured, saying that he could put up with the deformity which the operation on the frontal sinus produced. Within a few weeks the patient came back with a return of his old symptoms. He

had contracted a cold and the sinus trouble had started up afresh, and his radical operation, with the deformity, was all for nothing.

Dr. Freer (closing): Dr. Beck's statement about the development of osteoperiostitis in his case is interesting, but I do not think that the complication, coming so late, had any relation to the operation.

I have not read Siebermann's paper. It is a well-known fact, however, that the nasal wall of the antrum in the middle meatus is always thin and sometimes is membranous, and in many cases one could push the little finger through with but little force. This crude procedure, however, is not to be compared with the radical operation I have described. An opening in the middle meatus made with the little finger would be too high to be suitable for drainage and would soon close again.

There has been no trouble from epiphora in my case or other sign of injury to the tear duct. The tear duct is at least as liable to damage in the usual Caldwell-Luc operation and its even more destructive later more radical modifications, than in the operation I have described, yet one does not read of lachrymal troubles as common sequelae. The most energetic operators not only take away the entire facial wall of the antrum, but all of its nasal wall, and so attempt to obliterate the cavity, and they must certainly cut off the tear duct in many cases, but I recall no report of difficulty with the flow of tears into the nose following their operations.

Dr. Ingals suggests that a trocar will do as well as the trephine in the intranasal operation. I do not agree with this, for I have often been unable to force even the heavy Krause trocar through the nasal wall of the antrum in the inferior meatus, as the bone was too strong and thick. The trephine will perforate any thickness of bone with ease and but little pain, while the trocar causes a great deal. An advantage of the trephine is that it makes a nice round opening, readily found again for the insertion of the bur. It is not necessary to use curved instruments to operate upon the nasal wall of the antrum. I tried the straight trephine and bur on a number of cadavers before I attempted their use on the living subject, and I found the nasal wall of the antrum always accessible to straight instruments. Deflections of the septum would, of course, prove a hindrance and would need preliminary resection.

As to the statement that it is not safe to curette thoroughly, I do not see why one should not curette as thoroughly from the nasal fossa as through an opening in the facial wall, as is done in the Caldwell-Luc operation. Curettements that remove every vestige of mucous membrane and leave the bony walls bare I think unnecessary, and think that a punch forceps, such as Rhode's, which can be passed all over the inner surface of the antrum to cut away fungosities and polypi will accomplish all that is needed in all but the rarest cases. In these the sharp spoon might be needed, but there is ample opportunity for its use through the intranasal opening described.

The Gruenwald forceps, suggested by Dr. Ingals, bites out only small pieces at a time, and its back does not fit the free edge of the window being made, as does that of the Rhodes forceps. The Gruenwald forceps is a straight instrument opening vertically, with a straight beak, or one attached at an up or down angle, and does not apply itself as well as the S curved Rhodes forceps, which opens laterally, so that one blade siezes the inner surface of the wall and the other its outer. It also has the merit of cutting away large pieces at a time.

The use of the chisel, suggested by Dr. Robertson, is feasible, and the instrument may be employed in the absence of the trephine. The chisel does not, however, work as rapidly and painlessly as the trephine, and as one needs the bur at any rate, and therefore a surgical engine, the trephine should be the instrument of choice.

It is, I think, unnecessary to remove the middle turbinated body in these cases, even if hypertrophied, because when one has obtained the perfect ventilation and drainage of the antrum offered by the opening made in the intranasal operation described there is no need of considering the middle turbinated body in most cases, as it will usually get well as soon as the irritation from pus is removed.

The best instrument for rapid, clean-cut work in removing the nasal wall of the antrum is the bur. When it has made a sufficient opening the forceps may follow to cut out the edges not readily reached by the bur, but no forceps will cut well along the thick base of the wall, while the bur will cut it to the bottom, and at the bottom it is most necessary to remove the bone. This thick remaining ledge may be planed off so thoroughly with the bur that the nasal cavity fairly shelves down into the antrum and the pus can escape.

Why tears flowing into the antrum should make a complication I cannot see, because the tears are a bland fluid. I refer to the remark made by Dr. Andrews.

The method I have described is essentially the last step of the Caldwell-Luc operation, only it is done from the nasal fossa instead of through an opening in the facial wall of the antrum. The idea of the intranasal method is not to merely have a drainage hole through the nasal wall in the inferior meatus, but to radically resect this wall; that is, to make a great opening that will stay open.

It is true that the alveolar gutter is below the floor of the nose when the patient is upright, but the favorable results of the Caldwell-Luc operation show that this slight difference in level is of no consequence. Alveolar drainage, to be sure, takes place through the most dependent part of the antrum when the head is upright, but the ineffective little opening possible does not permit purulent coagula to pass through. The shelving plane leading from nose to antrum created by the bur reduces to a minimum the difference in levels.

In regard to the difficulty of this operation, referred to by Dr. Shambaugh, I repeat that I have done it on a number of cadavers and have not found it hard to open the antrum in the manner described. I like to work with straight

instruments in these cases, because the sense of direction is more exact than with curved ones, and hence I feel what the instrument is doing.

As to the frontal sinus complications, doubtless pus will flow from the antrum into the frontal sinus at times; but the mere entrance of pus into an accessory sinus does not necessarily create active suppuration in it. I recall a frontal sinus case where pus flowed from the frontal sinus into the antrum, collecting there, yet the antrum was not diseased and produced no pus itself. In my experience uncomplicated empyemas of the antrum are more common than those accompanied by suppuration of other sinuses; in fact, we have all seen numbers of them.

As to the closure of the opening, I will say that such a radical opening as I have made will not close.

CHICAGO NEUROLOGICAL SOCIETY.

Dr. Sidney Kuh in the chair.

A Peculiar Case of Lack of Orientation and Occipital Lobe Disease.

Doctor Patrick presented a man fifty-three years of age, a carpenter and ranchman by occupation. He never had been very strong, and dozens of times had what he called "lung fever;" that is, acute pulmonary attacks, probably not pneumonia. He denied all venereal disease, and had been fairly well able to work as a carpenter, farmer or ranchman until December, 1900, when he "took a violent cold." He had been working in wet and cold, on a ranch in Nebraska, shoveling corn to feed hogs, and got his feet and legs wet. Suddenly he was taken with what he described as severe pain in the back of the head and back of the neck. He afterward said that this was rather a feeling of intense cold—so intense as to constitute a pain. He went into the house and tried various means to relieve this cold pain. After several hours, application of heat by means of bags of heated salt gave some relief, but for several days he had a cough and for two or three weeks a terrific headache in the back of his head. Whether he was delirious or whether he had a very high fever, he does not know but he was confined to the house for about three weeks. The pain in the back of the head continued in lesser degree until about a year ago, since when he has had more or less frontal and temporal headache, but no severe pain.

When he recovered from this acute attack, which to him did not seem such a strange or peculiar illness, he noticed nothing in particular until he went out into the feed lot and about the stables. Then he experienced a very peculiar difficulty. I must explain that the "feed lot" was an enclosure of about ten acres, where were the stables, sheds and other out-buildings of the ranch and a number of "feed bunks," or troughs for feeding cattle and hogs. The house was separated from the feed lot by a road.

After working in one part of the feed lot, or wishing to go to another part, he had no idea as to which direction he should take. This confusion was especially marked if he was working

at the feed bunks, which were scattered about without order. He would look all around, searching the horizon for a landmark. Having located the house, or horse stable, he could approximate the proper direction, and thus, after a fashion, was able to go about his work. When out on the range, an open undulating prairie, out of sight of the buildings, he was completely at a loss and could not find his way about. If the expression may be allowed, he was totally at sea; almost without orientation.

In consequence of this disability he lost his position, and since last August has been living in a Chicago suburb of about 1,800 inhabitants. In this suburb he was born and reared and lived until he was twenty-eight years old. Yet, in this village he gets lost if he leaves the home of his brother, where he is now living. When taken to the house in which he had lived for many years, he recognizes the structure from certain features which he remembers, but has no conception of the relation of this house to the remainder of the town, and cannot go alone from it to his present residence, about a half a mile away. Last fall when he went a couple of hundred yards back of the house to dig potatoes, he had to be conducted to and from the house.

When in answer to leading questions, he tried to explain exactly the difficulty he had on the ranch and in the feed lot, he gave a very good description of a man with greatly restricted visual fields. He could see nothing except what was directly in the line of vision, and had to turn himself about and sweep the entire horizon and near lying country for some landmark.

This restriction of the visual fields also causes difficulty in walking because he is uncertain about the conformation of the ground. Although he can see it, he sees it indistinctly and cannot estimate accurately the height of steps or other irregularities, unless he puts his head forward and look directly at the place where he is to put his foot.

I examined the visual fields in a rough way, and Dr. Mortimer Frank has been kind enough to verify my results by a perimetric examination. Recognition of colors is restricted to central vision. For objects there is homonymous irregularly quadrantic vision. It might be described as homonymous hemiopia with the additional loss of the upper quadrant of the hemiopic field. Another peculiarity is that at the extreme periphery of the blind field there is for five or ten degree some vision.

The great restriction of the visual field explains in large measure, the patient's difficulty in getting about, and at first I supposed this embraced the entire disability. But a little further investigation convinced me that he has, in addition, impairment of the sense of orientation—whatever that may be—and impairment of the visual memory. But this defect of visual memory pertains especially of localities, location and direction. The appearance of single objects he remembers fairly well and even the arrangement of objects in a given locality he remembers to a certain extent. For instance, he drew for

me a diagram of the feed lot on the Nebraska ranch and located in it the various buildings, water tanks, etc. and from the way in which he did it, and in which he verified his own diagram a few weeks later, I believe the plan is practically correct.

His greatest practical difficulty is in locating himself in reference to his immediate environment. Even in the house where he lives, which is neither a large nor complicated residence, he is more or less confused. If, after reading for a time, he wishes to go to another part of the house, he cannot start off directly in the proper direction, but has to look all around the room, locate familiar objects and then conclude which way to go. Making out the points of the compass is a laborious process.

In addition to this confusion dependent upon lack of orientation, he appears to have impairment of memory of things seen. Even allowing for the fact that he sees many things indistinctly, and that it is easier to see them indistinctly than to make the extra effort to get them all in turn into the fixation point, I am convinced that he does not remember sufficiently well, objects which he does see clearly. For instance I sent him into an adjoining room with instructions to note carefully everything that was in it and then come back to me and enumerate them. He took particular pains to note carefully every object in the room but was unable to enumerate them ten seconds later. Of seven objects noted he forgot three. Fifteen minutes later, he had a still more imperfect recollection of them. Apparently he does not remember faces as well as he should, and is entirely unable to recall houses, rooms, stairways and similar things with which he should be more or less familiar. He says that he does not remember well what he reads. He remembers much better what he hears but says that in all respects his memory is not as good as it was.

The examination reveals remarkably little in addition to the peculiar visual fields. Central vision is good except for an error of refraction which he has always had. The fundi are normal, the pupils are equal and react perfectly to light. Hemipic reaction has not been examined for. Physical examination reveals nothing except that the wrist jerk is a little more brisk on one side than the other. Motion, sensation, co-ordination thoracic and abdominal viscera, are normal. There is no arteriosclerosis. Aside from vision, the special senses are unaffected.

Question: Is he conscious of the darkness on one side?

Answer: He did not of himself state that he could not see objects on one side in certain directions, but when questioned about it said that when moving objects approached him from one side he did not see them until they got to the middle. In his own statement he did not complain particularly of his failure of vision but that he got lost and confused, could not find his way about and, consequently, could not make a living.

It seems to me perfectly clear that he has a bilateral occipital lesion such as to cause disappearance of the visual field on one side and disappearance of practically the upper half of the field, on the other side. Lesion of any other part of the visual tract seems to be out of the question. I should suppose that the visual center on one side was destroyed and that he had a small lesion on the opposite side, undoubtedly on the mesial surface. According to Beevor and Colliers recent "A Contribution to the Study of the Cortical Localization of Vision, Brain, 1904, p. 153, this would be of the lower part of the cuneus and probably of the lingualis.

I am at a loss to determine what the lesion is, or rather was. It seems quite unlikely that it was caused from vascular occlusion, as the condition which would produce thrombosis or embolism seem to be absent. I presume that the acute illness which he had when this trouble appeared was an infection of some sort, and that the infection produced the localized encephalitis or meningitis. I presume this might be due to either the germ of influenza or the pneumococcus.

As regards treatment, I believe that no measure directed against the lesion itself would be of any avail, but I have thought that some educational procedure might be of benefit and this I expect to try.

Dr. Sanger Brown: I would like to ask if since this trouble the patient has found that hardly anything seems as it did before. Has he been able to enjoy that sense of knowing where he was and appreciating things just the same as before?

Dr. Patrick: He has not. As I have said he feels very much at sea all the time. He gets confused even in the house. Things that should look familiar, seem unfamiliar. And this can scarcely be explained by the defects of vision alone.

Dr. Mettler: What is the objective sense of orientation? When he shuts his eyes can he see things as they ought to be?

Dr. Patrick: I tried to get at that and asked him what was in the sitting room at home. He mentioned most of the objects and their location but forgot the couch. There are not many things in the room. The patient said that when he came back to where he lived as a boy, he could not see a thing, except one, that seemed familiar. To be sure he had been away twenty-three years, but could recognize only an old tree where he used to have a swing.

Dr. Brown: When you have dreamed since your sickness have you dreamed of things in their natural relations?

The Patient: I have not dreamed in twenty-five years.

Dr. Brown: Could you now, by trying to think of it, remember scenes in your early life, how they looked—recall them as you did before you were sick?

Answer: Yes, I remember them.

Q. Can you remember who wore glasses, for instance and the peculiarities of your playmates?

A. Yes, very distinctly.

Dr. Sanger Brown: In assuming that there would be one lesion which has disturbed the visual power in the right occipital lobe; to assume that this lesion, whatever it was, passed over a little into the other lobe and injured the contiguous parts of the other lobe, that would not very well account for what you find there in his visual field, because there would have to be, in that case, a disturbance of central vision.

Dr. Patrick: I think not. Central vision is the last to go.

Dr. Brown: There is some central vision in each cuneus. There is a double supply from the center. That is the pit or core of the whole thing. There is nothing left on the other side to lap over and supply central vision, if you take it out of the two, as you would in a lesion starting from the other.

Dr. Barker: It has got to be over the entire occipital region, according to von Monakow.

Dr. Patrick: I think a partial injury of the cuneus on one side would account for the quadrantic loss in addition to the hemianopia from a more extensive lesion of the other side.

Dr. Barker: It has to be the lower part of the occipital lobe.

Dr. Patrick: Beevor and Colliers' conclusions do not entirely agree with other writers as to the location of the lower part of the lobe.

Dr. Brown: I do not believe it has been fairly proven that the cuneus has all to do with it. I believe it radiates over the entire occipital lobe, but the ophthalmologists and pathologists who examine cases post mortem, seem to be of the opinion that the cuneus is the only part. I believe that the reason here is so effective in obliterating central vision, is because it goes across the fibres that go to the other parts. This is comparable, in some particulars, to internal capsule lesion in motor diseases.

Dr. Mettler: The case interests me from another side, the psychic side. There is a loss of space sense, and we are taught that we acquire that through vision. He has lost the fundamental space sense, which enters into the psychic section through his loss of vision, this orientation being a psychic loss—something gone out of the man's mind.

Dr. Kuh: Berlin has published a case like this. I do not remember it distinctly but I think there was less disturbance of the visual sense than here.

Dr. Patrick: What do you think the lesion was?

Dr. Brown: There is no way to tell. You might expect that at first the vision would have been worse than it has ever been.

Dr. Patrick: There is no indication of vascular disease; the heart is good and the arteries show nothing in the examination which would lead one to suspect he has thrombosis. I recall three cases of occipital lobe thrombosis, but none like this. The man has been peculiarly susceptible to pneumonia.

Dr. Barker: There would seem to be a spotty encephalitis, with marked destruction of brain substance. Most of these terminate fatally, but some do not. In this the influenza bacilli are present and effect both hemispheres,

but one end of the brain more than the other.

Dr. Patrick: That would explain it better than meningitis. Don't you think he had this encephalitis on both sides?

Dr. Barker: It usually does effect both hemispheres and his symptoms point strongly to it. He had a bad cold and excessive pain in the back of his head.

Dr. Brown: I think we could exclude hemorrhage; he would have been totally blind and then got better. I think encephalitis is the better explanation.

Dr. Kuh: Education seems the only possible thing to do for him.

A case for diagnosis—presented by Dr. D'Orsay Hecht at the request of Dr. H. T. Patrick. The patient was a man 36 years of age, who first came under the speaker's observation one week ago in Dr. Patrick's neurologic dispensary service at the Northwestern University Medical School. He was a carpenter by trade. His present disability had caused him to drop that occupation and for the past two or three years he has peddled principally tea and coffee for a living.

He had been married twelve years and was the father of a healthy boy. His wife had no miscarriages. The family history so far as he knew, had been negative. His father was living and well at 62 and his mother enjoying good health at 58. The patient was the oldest of 13 children, of whom eight were living; of these a brother and a sister were said to have "enlargements of the neck" (perhaps goitre.) As to the venereal history both gonorrheal and syphilitic infection were strenuously denied nor was there found upon examination any somatic evidence of past lues.

The patient had been a heavy drinker ever since his 15th year, indulging in both liquor and beer. Nine years ago he sustained a fall from a 22 ft. high scaffolding, attended with immediate loss of consciousness. Having been taken home and put to bed, consciousness was regained in an hour or so and it is stated that he then passed considerable blood per rectum (according to patient, a half bucket full.) Except for the occurrence of a few vomiting spells, the six week's term in bed, following this accident, revealed neither marked subjective or objective symptoms. There was no paralysis of the extremities; no notable inco-ordination; no vesical or rectal disturbance.

His first attempt to get up and resume work was attended with great weakness in the legs and some dizziness. Vision in any direction engendered a feeling of marked and constant vertigo, which was not further aggravated by sudden changes of position of body or head. Sudden rising up or lying down did not affect it. Simultaneously subjective sensations of dark spots floating before the eyes were experienced. He had been singularly free from headaches. Transitory diplopia had been present. A return to his former occupation in this condition had proven a physical impossibility, and the patient took up with the bottle beer business, in the pursuit of which he had managed personally to consume as much as two cases of beer a day.

During the two years so engaged, he was better and worse. In a state of drunkenness and while delivering beer, he had met with another fall to the ground from the wagon seat and the jar so received seemed to have increased his weakness, because his gait now became markedly unsteady and a speech defect (dysarthria) appeared for the first time. The bottle beer business was abandoned for an active interest in a pool and billiard room. His co-ordination at this time must have still been fairly good, since he was able to make runs for three and six in three ball billiards and occasionally put down a half-frame in pool. He concedes that there might have been an element of good luck in his play.

For the past two years, which have been devoted to tea peddling, all symptoms and especially those of inco-ordination have been alternately better and worse. When away from localities in which he was well known, he had been arrested several times for drunkenness, the impression readily justified by his extremely ataxic gait.

Although inclined to an occasional display of emotionalism, there had always been a decided sense of well being, akin to euphoria—this despite acknowledged domestic infelicities and economic distress. To his own immediate infirmities, he had referred in terms of "feeling fine, never better in my life and etc." At no time had he presented spasmodic weeping or laughter. There had been no signs of mental enfeeblement and his memory remained unimpaired.

Physical examination revealed the following: Nystagmus-like twitchings of both eyes when in extreme lateral position (in no sense genuine nystagmus.) The right pupil was somewhat larger than the left, both regular in outline and reacting well to light and accommodation, but none too promptly.

The visual fields were normal for distance and color. It had been Dr. Gradle's first opinion that the temporal halves of both discs showed a slight shade of pallor, but on second examination he had concluded the fundi were normal. The tongue was tremulous on protrusion. Dysarthria was marked—an admixture of syllable stumbling and scanning speech.

Of the motor symptoms, the most conspicuous was the gait, decidedly cerebellar in type, broad based, and purely ataxic with lateropulsion to the left. None of the extremities were in the least spastic.

The marked inco-ordination was further demonstrated with patient placed upon his back and his legs raised in the air. Execution of this movement was attended with widely excursive most disorderly swaying of the legs. There was absolute inability to maintain them in static equilibrium.

Approximation of the index fingers to the nose with eyes shut, was impossible even after repeated trials.

Sensory phenomena, solely of the paraesthetic variety, were confined entirely to the distal parts of both upper and lower extremities.

The patellar reflexes were only satisfactorily elicited with Jendrassik reinforcement—the right being somewhat weaker than the left. The Achilles jerk also requiring Jendrassik, were present and more equal. The Babinski toe sign was absent. Of the skin reflexes, the plantar, cremasteric and abdominal were active on both sides. The anal reflex was present.

Referring to the diagnostic possibilities in the case, Dr. Hecht stated that a cursory examination of the most conspicuous features had suggested a "snap shot diagnosis of pseudo-tabes alcoholica," which was abandoned immediately upon more careful consideration of the findings.

The diagnosis of multiple sclerosis had then seemed quite tenable, although there was nothing typical of this disease in either the eyes, the speech, the gait (total absence of spasticity) the reflexes (either deep or superficial) or the mode of onset. Some findings which Dr. Edward Muller in his recently published classic monograph on multiple sclerosis had emphasized to a degree of diagnostic import, were totally lacking in the present case.

The possibility of cerebellar disease had received only passing consideration because of the failure to reconcile the symptoms to a lesion in this location. In this consideration, the speaker called attention to the conclusions drawn by Babinski from his studies of static and kinetic equilibrium in cases of cerebellar asynergy.

The Babinski "dissociation of the two kinds of volitional equilibrium" the kinetic and static, had not been demonstrated in this case, nor had the patient encountered any difficulty in executing rapid supination and pronation of the hands, (diadokokinesia), a function supposed by Babinski to have its anatomic seat in the cerebellum. From all these negative premises, Dr. Hecht felt constrained to call this an obscure case and invited the members to suggest a diagnosis.

Dr. Grinker, who had been privileged on two occasions to see the case, thought that Dr. Hecht had covered all the points brought out at a joint examination. He, too, had favored a diagnosis of multiple sclerosis, and upon first examining the discs thought the temporal halves had appeared slightly paler than normal, but a second look had disabused him of this belief. To eliminate all doubt, he had asked Dr. Gradle to examine the eyes and he reported the nerve as slightly grayish-white, but not pathological. The history of chronic alcoholism, the apparent reduction of the tendon reflexes together with the gait, were highly suggestive of pseudo-tabes, but the absence of sensory symptoms weighed heavily against this conclusion. He said that he, too, was familiar with the Muller monograph on multiple sclerosis, which he had probed for case reports with reduced or abolished knee reflexes. The testimony on this point had not been convincing, nor had he ever seen a case in which the patellars were weakened or absent. He thought that this might be one of the very atypical cases of multiple sclerosis. Muller had declared as essential to the diagnosis of this disease, symptoms beginning early in life, with a slow and insidious onset. In this case, they ap-

peared in adult life acutely and rapidly progressive following trauma. With such a history the diagnosis of a myelitic process (sclerotic areas) seemed not altogether unlikely, but he preferred to ask rather than answer the question—what is it?

Dr. Sanger Brown asked whether the ataxia had been as marked two or three months after the accident as it was now.

Dr. Hecht replied that it had been sufficiently great to prevent return to his trade, but had not so early advanced to its present degree. For seven years after the accident, he felt decided improvement from time to time; only in the last two years had he become noticeably worse. **Dr. Brown** then inquired as to the patient's muscular strength and power. **Dr. Hecht** was able to demonstrate that the patient was in all respects strong, but that he tired easily and frequently required a half hour's rest to put him right again.

Dr. Llewellys Barker asked **Dr. Brown** whether the speech defect in this case bore any resemblance to the dysarthria in the cases of cerebellar ataxia, described by them (Barker and Brown.) **Dr. Hecht** had the patient repeat the Lord's Prayer, commenting upon the rhythm, the tonal monotony, the confluence of some of the omission of other syllables. **Dr. Brown** then replied that the speech differed considerably, it having in their cases been more confluent, more guttural and grunting in character.

Dr. Sidney Kud said: One possibility always to be thought of in an obscure organic disorder was that of specific disease. Although infection had been denied, the sort of life the patient led would not make the fact at all improbable. If it were his case, he would give the patient the benefit of the doubt; it could do no harm and might clear up the diagnosis. At the Post Graduate Hospital he had seen a colored man in a similar condition, derive enough good from antisiphilitic treatment to enable him to return to his work. To him the diagnosis in the present case, rested between syphilis and an atypical disseminated sclerosis, perhaps a pseudo-sclerosis.

Dr. L. Harrison Mettler looked upon the case as one of the atypical forms of multiple sclerosis with alcohol as an underlying cause producing encephelo-myelitic foci simultaneously with the changes in the cord (N. B. P. 25.)

Dr. Barker felt that in lieu of the bizarre character of the case, **Dr. Kuh's** suggestion to try specific remedies should be carried out. He did not care to venture anything approaching a definite diagnosis.

Dr. Grinker said he had deterred from making a diagnosis of specific disease because of the entire absence of somatic findings and the knowledge of a healthy family.

Dr. Hecht, relative to **Dr. Kuh's** suggestion of possible lues, put particular strength upon the total absence of headaches at any time in the history of the case, adding that the only headache the patient had ever experienced was (to use his own words) "the head of the jag."

Dr. Sanger Brown then referred to his publication three years ago, of three cases of acute ataxia, in which the progressive asynergy acute

in onset had been very much more pronounced than in this instance and spasticity was recorded in all. He was able to observe them for a number of years. In one of the cases (that of a lady) in which he had determined a cerebral lesion involving the red nucleus, there were symptoms of third nerve paralysis associated with those of hemiplegia. Some fibres of the pyramidal tract were involved in their passage through the pons. Another instance recalled, was that of a man 23 or 24 years old, still living, who had not walked for years, whose strength had not diminished a particle, whose speech was more affected than this man's, and whose incoordination was greater.

In the case now under discussion, he ventured the opinion of some lesion not in the cord, but in the cerebellum which had thrown it (the cerebellum) out of circuit. He thought that in view of the history of trauma and the acute onset of symptoms in an otherwise healthy man, the diagnosis of specific diseases was far fetched.

CHICAGO SURGICAL SOCIETY.

A regular meeting was held February 6, 1905, with **Dr. D. A. K. Steele** in the chair.

Ankylosis of the Jaw.

Dr. Emil Ries cited the case of a boy, 21 years of age, who was sent to him six months after he had acquired syphilis. The patient's syphilis was, at first, treated by an irregular practitioner. The boy soon began to have ulceration of the mouth, although he did not remember ever having been salivated, and it was not known that this practitioner gave mercury. Ulceration of the mouth began, and when the boy consulted a regular practitioner, he was in a bad condition. His tongue was greatly swollen; he could not close his mouth on account of ulcerations; and large pieces of bone began to come out. One day a very severe hemorrhage from the mouth occurred, which the doctor had difficulty in controlling. Under antisiphilitic treatment his condition improved, so that the tongue retired into the mouth and the patient was able to close the mouth. Very soon, however, he found that while before he was unable to close his mouth, now he was unable to open it. The teeth on the left side having largely fallen out, he was able to feed himself on that side with a spoon, taking liquid food only. Part of the liquid food always escaped through the nose, so that feeding was rather difficult. At first, nutrition was very poor; patient decreased in weight rapidly, but gained under antisiphilitic treatment and careful feeding, so that when he came to Chicago in November he was in fairly good general health. In October, when the speaker first saw him, he still had syphilitic ulcerations in the mouth, which did not heal quickly, and directions were given for specific treatment. When he returned in November, he could not move the lower jaw; half of the horizontal ramus of the jaw on the left side had disappeared, with the angle of the jaw. Between the condyloid process and the jaw there was only ligamentous union by cicatricial tissues. The median line of the lower jaw corresponded vertically with the left naso-labial

fold, the jaw being pulled over to the left side. There was a perforation of the hard palate, with perforation of the septum. There were condylomata on the penis; the chancre was still hard; the glands were enlarged all over the body; but there were no mucous patches; no eruption on the skin. It seemed that the boy was as much troubled by the bad mutilation of his face in consequence of the absence of the angle of the jaw as by his inability to open his mouth. He desired very much to have something done for the caving-in of the left side of his face, and in determining upon the method to be followed in the operation, the speaker took that into account, and instead of making an incision along the zygoma, as would ordinarily be practiced, he decided to do an operation which would permit him to insert a sufficient artificial support for his face to make the left side correspond more to the other side. He intended to insert sufficient ivory pegs to give the appearance of a natural jaw. He, therefore, made an incision below the horizontal ramus, or where it ought to have been, and continued it up between the ascending ramus; then dissected his way down to the bone and to the cicatricial tissue, and dissected out the facial nerve and its branches carefully, so as to avoid wounding them. After they had been dissected out, they could be seen beautifully; he raised these parts forward, and on the left side tried to remove the condyloid process, which was firmly adherent to the skull. The coranoid process was buried in scar tissue, with the scar tissue extending down into the mucous membrane of the mouth, so that he was in considerable danger of opening into the mouth, an occurrence which he was particularly anxious to avoid to guard against infection of the wound. He succeeded in avoiding opening into the mouth, and could resect with the chisel the condyloid process. The coranoid process, which fastened the rest of the jaw to the scar tissue, he dissected out subperiosteally. Then he expected the jaw to be fairly movable. It was not. It was just as solid as it was before. Even after the condyloid process had been removed completely, there was no possibility of moving the jaw. He therefore decided that it would be necessary to operate on the other side also, and he sutured the pterygoid muscle out between the skull and the external soft parts, so as to avoid new bony formation between the base of the skull and the jaw. He then proceeded in the same way on the right side, but it was sufficient to resect the condyloid process, as the coranoid process had not interfered sufficiently with the motion, and he again sutured the pterygoid muscle out between the skull and the rest of the descending ramus of the jaw. On the left side, after having finished the dissection, he drilled holes into the jaw and inserted ivory pegs. At first he had two pegs ready, but found that if he drilled a sufficiently good hole for the second peg, he would run considerable risk of getting into the alveolar process, and of opening into the mouth, and one could not expect pegs to hold for any length of time if they were in contact with the mouth cavity in any way. He left one peg in place, which he could insert into

the horizontal ramus, and which healed beautifully. The wounds were closed completely by sutures, without drainage, and healed by primary union. At the end of the operation it was possible to open the mouth sufficiently to insert a good-sized piece of bread, or anything of that kind, so that the boy would be able to eat solid food.

In the after-treatment he insisted on early and frequent passive motion; then he began to teach the boy to speak again. His speech, when it came to him, was mumbling, very indistinct, in consequence of the formation of scar tissue in his mouth, and he actually had to re-learn to speak. At the end of six weeks' treatment, his mouth was clean and all right; the wounds were all healed; his mobility was very fair, and he proceeded to have a dentist to insert a plate, first of all covering the opening into his nose, the perforation of the hard palate, and, secondly, to enable him to chew. He was then able to chew food, if it was not too hard, and when he left the hospital, about eight weeks after the operation, he was in good condition, and his face looked pretty natural. There was still a little caving in on the left side, but the ivory peg held up the skin so well that there was a marked apparent angle of the jaw, and the deep cavity which had existed, at first, on the left side had disappeared. Now, the peg had healed in he thought it would be an easy matter to build up with paraffin in the side of the face, as there was something to build upon. The patient was going to return soon to have some more dental work done, and at that time the speaker expected to inject some paraffin.

He would have preferred to have discussed the case when he had the boy present to show him to the members, but inasmuch as he had been called upon unexpectedly to report some cases, he thought this one would be of interest to the society.

Dr. Ries also reported at length a case of extensive rectal strictures, and described the operations that were performed.

Dr. S. C. Plummer presented a case of stricture of the esophagus following typhoid fever; also a case of colloid carcinoma of the cecum.

Skiagraphs of Stone in the Kidney.

Dr. Joseph E. Smith showed skiagraphs of stone in the kidney. He passed around a print, also a negative, showing several small stones congregated in the lower pole of the kidney, and two larger stones in the upper portion of the pelvis of the kidney. The patient was operated upon and two larger stones were found above, and the lower mass seen in the skiagraph, which looked somewhat granular, was found to consist of eight or ten separate stones, the size of a small French pea.

He exhibited a negative which illustrated an interesting condition. The patient had been under the care of Dr. Billings, and it was suspected that the man had a tumor in the iliac fossa. A thickening could be felt in the region of the iliac fossa on the right side; the man had a great deal of pain; he was losing weight rapidly, and it

was suggested that a skiagraph be taken of this region. On examining the iliac fossa on the right side, a circular area, two and a half inches in diameter, could be seen, which was very irregular, showing that the bone was partly excavated in an irregular manner, and a rather definitely outlined tumor probably of periosteal origin in the iliac fossa. The skiagraph showed the circumscribed nature of the tumor.

Recently a patient was sent to him for a kidney stone examination. The man had been in perfect health, so far as was known, and had applied for life insurance. The life insurance examiner discovered a large amount of pus and some blood in the urine. The man had no symptoms whatever, and was surprised to be rejected for life insurance. He applied to his family physician, who took him to Dr. Kreissel, who catheterized his ureters and found blood and pus on the right side, with perfectly clear, normal urine on the left side. The patient came to Dr. Smith, who made a skiagraph of the kidney, and in two or three different skiagraphs the same shadow was seen which appeared to be a very large, irregular stone in the right kidney. This case was interesting from the standpoint that the patient had never had any symptoms and even yet had none, and he was not aware of the fact that he had any trouble on this side. The condition was discovered accidentally.

Sarcoma Which Had Developed From a Uterine Myoma.

Dr. E. C. Dudley showed a gross specimen, and some slides of this case, saying it was generally understood that sarcoma might develop from any of the following strictures: (1) The interglandular connective tissue of the endometrium. (2). The intermuscular connective tissue of the myometrium. (3). The walls of the blood vessels. (4). Perivascular connective tissue. (5). The Muscle cells. (6). Any of the strictures of a uterine myoma.

It was evident from the gross appearance of the specimen that the sarcoma had developed from a uterine myoma. Before operation the sarcomatous stricture filled the uterine cavity, and felt on intrauterine palpation like a retained placenta. In fact, was so pronounced by two excellent diagnosticians. Microscopic sections taken from various parts of the growth showed it to be a small round and spindle-cell sarcoma, the sarcomatous cells being substantially of the same size as the red corpuscles. The interesting features of this specimen were: (1). A rather sharp demarcation between the sarcomatous cells and the myomatous cells. (2). Presence in many parts of the sarcoma of clearly defined blood vessel walls. (3). The transition in the character of the blood vessels from those which have walls to those which are mere blood spaces.

In this case complete abdominal hysterectomy was performed on the seventeenth of November, 1904. There was nothing unusual in the operation, or in the subsequent recovery of the patient.

Dr. D. N. Eisendrath said as to the question raised by Dr. Smith regarding reflex pain in the opposite kidney, and of patients walking about with a pyelitis from stone in the kidney, without

having any symptoms or being conscious of it, he had had considerable experience in this direction. A patient whom he had under observation at the present time had had a pyelitis to his knowledge for the past five years; but whether there was a stone present in the kidney now or not, he was unable to say. Pictures were taken originally as the patient had symptoms of pain in the left kidney seven years ago. Skiagraphs were taken at the time, and they failed to show any stone. This failure was ascribed to the fact that there were probably uric acid stones, and did not give a sufficiently deep shadow. Shortly after this the patient passed from the right or opposite kidney a calculus about the size almost of an almond, and in spite of this he continued to have pus in the urine. He examined his urine with a segregator and found that pus came apparently from the side opposite to that of which the patient complained of pain. X-ray pictures were taken again, and failed to show stone. The patient had had no pain since that time, but had passed large quantities of pus ever since. He tried to induce the patient to have an exploratory incision made, but consent could not be had.

Dr. L. A. Greensfelder mentioned a case in which the X-ray plates showed the positive shadow of a stone. The patient not only had a stone, as shown by the skiagraphs, but all the clinical manifestations of stone in the kidney. Finally, she was operated upon, the kidney incised, and explored with the finger to the pelvis, but no stone found, although both poles of the kidney were carefully needed. In passing a catheter through the kidney from the uterine toward the bladder, the catheter would stick at a certain point and could not be passed any farther until finally, after trying it eight or ten times, using different sized catheters, it pushed by. The kidney was sutured, the lumbar wound closed without drainage, and the patient's symptoms subsided, although a small quantity of pus and a little blood were still seen in the urine.

Dr. Smith stated that all of the cases, the negatives of which he had exhibited, showing stones in the kidney, had been operated upon and stones found in the kidney at the operation.

The Oculist's Courtship.

"Ah, dearest; alone at last! No one can see us but the eyes of the night."

"And they are astigmatized," replied the young oculist.

"Tell me, dear, what are those two starry orbs yonder?" she asked again.

"Those," said the eye mender, "belong to your father's bulldog. Good night."—Cincinnati Commercial Tribune.

An Immune.

Naggsby—"I've having pains in the back of my neck, and I'm scared about that cerebro spinal meningitis epidemic."

Waggsby—"Calm yourself, my dear fellow. You're an immune. That disease has to have a brain to start in."—Baltimore American.

County and District Societies.

LAWRENCE COUNTY MEDICAL SOCIETY.

Regular meetings are held in Lawrenceville, the first Wednesday in March, June, September and December. Membership 22.

Officers.

President.....Dr. Z. D. French, Lawrenceville
Vice-Pres.....Dr. H. V. Lewis, Lawrenceville
Sec'y and Treas....Dr. B. F. Hockman, Sumner

The Lawrence County Medical Society held its regular meeting at Sumner, Wednesday, December 7, 1904.

Members present: Drs. Wm. Friend, W. M. Friend, B. F. Hockman, F. F. Petty, Z. D. French, J. E. Connett, R. R. Trueblood, H. N. Lewis, J. B. Bryant and A. G. Mountz.

Election of officers resulted as mentioned above, the retiring officers were: Dr. A. G. Mountz, President; Dr. Z. D. French, Vice-President; Dr. J. B. Bryant, Secretary-Treasurer.

Tuberculosis, Is It Hereditary? by Dr. Z. D. French. Dr. French's paper was one of the best that has been read to the society since its organization.

The subject matter was the more interesting because of the high death and the universal prevalence of the "Great White Plague." The thoroughness of the production indicated deep and exhausted physiological and clinical research.

Dr. French believes it to be infectious, preventable and curable. The paper was enthusiastically discussed by all present.

CRAWFORD COUNTY MEDICAL SOCIETY.

Regular meetings are held bi-monthly on the second Thursday. Membership 24.

Officers.

PresidentDr. Frank Dunham, Robinson
Secretary Dr. H. N. Rafferty, Robinson
Treasurer Dr. C. Barlow, Robinson

The Crawford County Medical Society met in regular session at the office of Dr. C. Barlow, in Robinson, on Thursday, March 9, 1905.

The following members were present, viz.: Firebaugh, T. N. Rafferty, Barlow, Dunham, Price, Jones and H. N. Rafferty.

The minutes of the previous meeting were read and approved. Those members on the program for papers were not present, so that the meeting was carried out somewhat as an experience meeting, with case-reports, various individual experiences, etc.

In the matter of business, the name of Dr. Samuel Smith was presented for membership in the society. On motion the rules were suspended, and Dr. Smith at once elected to membership.

On motion the chair appointed a committee of three to draft resolutions concerning the death of Dr. Hoskinson.

The following resolutions were submitted, and adopted by vote:

"Whereas, It has been the will of the Creator to remove from our ranks by death, Dr. W. H. Hoskinson, an able and constant member of the Crawford County Medical Society, be it

Resolved, That in the death of Dr. Hoskinson the medical profession of the county has lost one of its most earnest and energetic supporters, and the community at large a most valuable citizen, and

Resolved, That this Society extend its sympathy to the widow, family and friends of the deceased, and

Resolved, That these resolutions be spread upon the minutes of this society, that a copy of the same be sent to the bereaved family, and that they be published by the local press, and by the Illinois Medical Journal.

H. N. Rafferty,

C. Barlow,

C. E. Price,

Committee on Necrology.

After the collection of dues for the State Society from most of the members present, the Society adjourned, to meet the second Thursday in May, 1905, at the office of Dr. Dunham, in Robinson.

H. N. Rafferty, Official Reporter.

WILL COUNTY MEDICAL SOCIETY.

Regular meetings held at Joliet, on the first Tuesday of each month.

Officers.

President.....Jno. B. Benson, Joliet
Vice-President.....Wm. Dougall, Joliet
Secretary and Treasurer, Frank C. Fisher, Joliet
Board of Censors: Wm. H. Curtis, Alfred Nash, Wm. Richards.

Meeting of Will County Medical Society at office of Dr. Fisher, February 8, 1905.

Meeting called to order by President Benson. Minutes of last meeting read and approved. The report of the treasurer for year 1904, was read and on motion was approved and ordered placed on file.

Dr. Cohenour presented the names of Dr. Otto G. Wicherski, Rush 1904, now at Silver Cross Hospital. Dr. Harry R. Culver and Dr. M. T. Krahlwell both Rush, 1904, now at Illinois Steel Company's plant here, as candidates for membership. On motion it was decided that rule in regard to time limit of residence, be suspended in the cases of these applicants. Drs. Cohenour, McGann and Dougall were appointed a committee to investigate these applicants. The report was unanimously favorable and the candidates were on motion elected members of the Society.

Moved and seconded that the president and secretary have printed a blank form of application for use by this society. Carried.

The paper of the evening, **Cardiac Asthma and Mitral Stenosis** was read by Dr. McGann and was discussed by the members present.

On motion the president appointed Dr. Woodruff and Dr. Cohenour as committee to arrange place of meeting.

It was moved by Dr. Dougall that a committee of three with the secretary of this Society as chairman, be appointed to prepare new set of by-laws, etc. Motion was carried and the president appointed, Secretary Fisher, Dr. Dougall and Dr. Patterson to act as such committee.

No further business appearing the meeting was adjourned.

STEPHENSON COUNTY MEDICAL SOCIETY.

Regular meetings are held at Freeport quarterly.
Membership 30.

Officers.

President Dr. W. J. Rideout, Freeport
Vice President Dr. J. N. Daly, Orangeville
Secretary Dr. K. F. Snyder, Freeport
Treasurer Dr. M. M. Baumgarten, Freeport
Board of Censors: Dr. Hillebrand, Dr. B. Erp.
Brockhausen, Dr. J. A. Poling.

The first quarterly meeting of the Stephenson County Medical Society was held at Freeport. President Rideout in the chair.

A case of **Multiple Exostosis** was presented by Dr. B. A. Arnold; also a case for diagnosis presenting **Convulsions of the Jacksonian type** and also a case of **Cerbro-Spinal Meningitis** by Dr. J. S. Clark.

The following papers were then read: Dr. Linda K. Hutchins, **Gastro Enteric Infection** was the particular disease discussed in this paper.

The intestinal lesions in themselves are slight. The symptoms, are due to the absorption of the toxic substances from the fecal current duration and intensity, marked changes take place in especially the lower ileum and colon. Age, constitutional predisposition, environment, food and methods of feeding were given as factors of etiology. Temperature and its relation to humidity is also important.

This trouble is now thought to be contagious. Usually the whole of gastro intestinal tract is effected and the lower ileum and stomach are the most so.

The essential lesions appear for the most part in the superficial epithelium.

The symptoms may be gradual or sudden. The first few days nothing but the diarrhoea appearing. The stools are greenish yellow and thin, at first containing undigested food.

In the fulminant type, the picture is quite different child, suddenly becomes restless, cries and whines and may have a convulsion. The temperature rises and may go to 105 degrees. A large amount of gas is expelled, of foul odor.

In this condition the child loses weight rapidly and may develop into an ilio colitis or be the foundation for a fatal cholera infantum.

Prophylaxis, hygiene and diatetics are of utmost importance in avoiding this trouble. In the early stages, food should be strictly interdicted for from 12 to 24 hours and we should evacuate the entire gastro infestinal tract.

For this nothing is better than calomel in divided doses and castor oil, plus irrigation of the colon.

In cases of extreme exhaustion the ordinary supportive measures are to be used.

Conclusions: The mother must be instructed as to the diet of her child and that food in these cases is directly harmful.

No matter what the value of drugs, if they disturb the stomach they are worse than useless.

A paper by Dr. D. C. L. Mease on **Headaches**. The author stated that headache is a symptom of almost all diseases at one time or another. Is always a symptom and should be treated by treating its cause.

May be associated with other symptoms—dizziness, vertigo, nausea, etc., and may be occasional or constant. May affect all parts of the head, and superficial or deep seated. As headache is so common and so distressing, it cannot be too carefully studied. Also too headache may be the first symptom of grave disorders of insidious nature. The types of headache, according to their causation are given by the author as those due to:

1. Vaso-motor changes.
2. Structural changes.
3. Reflex actions.
4. Toxic effects.
5. Combinations of the above.

The first variety are probably the most common. The second type are not uncommon, and should early be differentiated, and are generally caused by pressure.

The headaches of different intracranial diseases is then discussed and differentiated.

The headache of hysteria and neurasthenia was then discussed.

Migraine is then taken up and a thorough study of the disease given and the various treatments given, most of them being ineffective, as is well known.

Following this a paper was read by Dr. Wm. F. Bushnell on **The History of Anaesthesia**.

LOGAN COUNTY MEDICAL SOCIETY.

Officers.

President, Maskel Lee.....Atlanta
First Vice-President, C. Rembe.....Lincoln
Second Vice-President, J. H. Butler..Hartsburg
Secretary, H. S. Oyler.....Lincoln
Treasurer, C. C. Montgomery.....Lincoln
Delegate, J. L. Lowrie.....Lincoln
Membership 20.

The Logan County Medical Society held its second annual meeting in the city council chamber of the city hall, Lincoln, Feb. 16, 1905.

Application of B. M. Berringer of Lawndale, was presented and unanimously accepted.

The above named officers were elected.

The following committees were then appointed: Committee on Program, H. S. Oyler, H. L. Cosby and C. C. Montgomery of Lincoln.

Committee on Scientific Work—Maskel Lee of Atlanta, P. H. Oyler of Mt. Pulaski, and J. R. Barnett of Lincoln.

Committee on Social Entertainment—A. M. Sargent of Lincoln, J. H. Butler of Hartsburg, and H. M. VanHook of Mt. Pulaski.

Committee on Public Health and Legislation—P. H. Oyler of Mt. Pulaski, W. H. Kirby of Chestnut and L. L. Leeds of Lincoln.

Board of Censors elected are as follows: C. C. Montgomery, term expires 1906; C. Rembe, term expires 1907; B. P. Bradburn, term expires 1908.

The subject under discussion being **Smallpox** H. S. Oyler of Lincoln, presented the Society with a paper on that subject. The paper being prepared from the notes of some 48 cases coming under his care in 1901.

C. Rembe of Lincoln, being on for regular discussion, gave a very interesting report of cases occurring in his practice. The subject was then discussed by most of the members present.

The Society then adjourned to meet with Brainerd District Medical Society, April 27, 1905.

DOUGLAS COUNTY MEDICAL SOCIETY.

Regular meetings are held at Tuscola. Membership 24.

Officers.

President W. A. Wiseman, Camargo
Vice President E. S. Allen, Arcola
Secretary W. C. Blaine, Tuscola
Treasurer W. E. Rice, Tuscola
Board of Censors: J. L. Reat, Tuscola, C. Rutherford, Newman and Lockwood.

At the regular meeting of the Douglas County Medical Society held in the city of Tuscola the following action directed to Governor C. S. Deneen was adopted:

Whereas, We have learned that Dr. J. W. Pettit, of Ottawa, Illinois, is an applicant for the position of Secretary of the Illinois State Board of Health. We who know the doctor personally, and those of us who are acquainted with him by reputation agree that Dr. Pettit is preeminently qualified, not only professionally, but morally and intellectually to fill this responsible and important office; therefore, be it

Resolved, That we most respectfully and unanimously request his appointment at the hands of your excellency.

W. A. Wiseman, President.

Walter C. Blaine, Secretary.

BRAINERD DISTRICT MEDICAL SOCIETY.

Regular meetings held quarterly. Membership 80.

Officers.

President.....Irving Newcomer, Petersburg
Secretary.....Harry Loyle, Lincoln

The Brainerd District Medical Society held its 112th quarterly meeting in the parlors of the Commercial hotel, at Petersburg, Menard County, January 26, 1905.

President Irving Newcomer of Petersburg, in the chair.

The following applications were received: Charles Rembe, of Lincoln and John T. Myers, of Petersburg. Both being favorably acted upon they were received into full membership.

Upon the motion of I. W. Newcomer, a committee consisting of president and secretary drafted and offered the following resolutions of sympathy.

Our brother practitioner, P. L. Dieffenbacher of Havana being unable to attend to the active duties of his profession and unable to meet with us today, therefore, be it

Resolved, That this, the Brainerd District Medical Society extend a vote of sympathy and encouragement to Bro. Dieffenbacher in his present illness and that each and every member of this society hopes for his speedy and complete recovery.

The following paper on **Cholelithiasis** was presented to the society by A. G. Servoss of Havana:

Cholelithiasis.

"Cholelithiasis a diathesis favoring the formation of biliary calculi, the presence or formation of biliary calculi."—(Dorland Med. Dict.)

Synonyms: Gallstones; Biliary Calculi; Biliary Colic.

A. G. Servoss, M. D., Havana. According to the above definition of a well known authority this term is not limited to the actual presence of gallstones, either in or out of the gall-bladder but also includes the diathesis which is responsible for their presence or may at some future time cause them to appear, and it will be our aim in presenting this paper to include the cause as well as the effect.

It may be well to add that the presence of gallstones, in the cystic, common or liver ducts are included and the stones or concretions are considered even after they have ulcerated through and entered the intestines, stomach, liver, urinary bladder or peritoneal cavity. The disease has been known and described in medical literature ever since the year A. D. 1565, hence it is not new and we may well wonder that more radical means for its relief were not sooner discovered and put into practice for it was not until the year of 1882 that this work was put into practical shape and begun to be recognized as a useful procedure or even a legitimate operation.

Since that time rapid advances have been made all along the line of abdominal surgery but more particularly in surgery of the gall-bladder and the ducts leading to and from it.

Shortly before the year 1882, so well known and recognized an authority as Gross not only gave no procedures for this work but wrote as though an operation in this locality was almost homicidal.

At the present time however such is far from being the case and operators at the larger centers are reporting their operations by the hundreds and their mortality practically at zero where the case is seen and operated on at an early period.

Diseases of the various bile ducts are very much more common than we of the medical profession have believed, as will be shown by the fact that the post mortem table has shown us that in a large number of successive examinations 10% of the bodies examined have contained fully developed gallstones; when we stop to consider that not all cases of diseases of these ducts and glands go so far as to produce

calculi we can readily see that many people have a trouble that is likely sooner or later to produce gallstones.

It may be readily seen that not 10% of our patients have gallstone colic but not all cases of biliary calculi have the attacks of pain that we have in the past thought existed in every case having gallstones, many are those who carry the calculi through life not knowing of their presence: This is explained by a recent authority who says that they do not produce their characteristic symptoms until they have produced an inflammation of the gall bladder sufficient to cause the pain or have displaced the stones so as to cause them to enter or block the duct. All ages and conditions of persons have the disease even new born babes have yielded up calculi on examination but it must be said in all fairness that it is rare before the 40th year and that female patients are much more common than male patients; thus will it be seen that while the disease is much more common at the extremes of life it is rarely seen during the most active period of life and that when it does come those most active in out door life are the ones to escape also that animals in their wild state are almost never found to have it while those kept in confinement are likely soon to show it. We may then draw the conclusion in line with some of the best writers of our time and assert that "whatever hinders or impedes the flow of the bile is a predisposing cause of Cholelithiasis."

It is said that a large per cent of those having the disease have at some time had typhoid fever and that the condition is caused by this disease in a large number of cases; some authors going so far as to say that many cases of supposed typhoid fever are no more than liver disease which takes on the typhoid form or type.

Certain it is that any form of sepsis leaving the intestine and traveling up the common duct, by continuity of tissue, may produce the impediment to the flow of bile necessary for the formation of stones. This condition is not however necessary for their formation as mere inactivity or constriction of the body, as by corsets and skirts, is sufficient to produce stasis of the bile, and like the fecal mass retained too long in the rectum a hardening or drying process will soon set in. Motion having been resumed, or the constriction removed, the bile again starts its onward flow forward the plug of dried bile which engaging either in the cystic or common duct, brings on one of the milder attacks of colic.

Should the plug be delayed in the passages it will soon receive deposits of lime or other material and become a veritable stone. Even thus it may not cause the attacks of pain we call gallstone colic and for years may remain quietly in the fundus of the gallbladder till life may be terminated by natural means and the patient die innocent of the fact that he has this disease; on the other hand however an accidental movement may pump septic material into the bladder or it extend from the intestine, or the septic material be in the bladder and for

lack of an opening fail to infect the lining membrane until some misplacement causes the same to be broken, when the septic material enters the membrane and a cholecystitis is set up and the ducts swollen to such an extent that the fluid cannot easily pass or the swelling of the membrane causes the stone to engage in the passage when we have the typical attack of colic.

Here the case may suddenly end by the stone being small enough to pass into the intestine and thus outside the body.

More often however the stone drops back into the bladder and at another time tries to run the blockade or if it gets out another may soon take its place and the symptoms will be repeated.

Oftentimes the stone in place of passing into the intestine, or dropping back into the gallbladder becomes lodged in the cystic duct and remains there until removed or naturally released in which case we have the attacks of pain lasting much longer, or until the bile finds a way around the obstruction, but it does not flow freely enough to relieve the symptoms entirely and in a short time there is a swelling of the gall bladder and a condition of empyema, or of dropsy, of the same.

This course may not be the one chosen but the stone on its way to the outer world be arrested in the common duct and we will have the symptom of jaundice, which to the trained mind always means obstruction of the common duct.

It may seem paradoxical to the casual reader but obstruction of the cystic duct produces enlargement of the gallbladder while if the obstruction is placed a little further along and the common duct is the one affected the gallbladder shrivels and jaundice appears on the scene.

Symptoms. It would hardly seem that one writer would in a paper of this kind present all of the symptoms that appear in all of the cases of this disease so we will only study those main symptoms that make a diagnosis a certainty.

The patient will most likely come to you in the person of a female past the age of 30 years and will complain that for some years she has had trouble with her stomach, also spells of so called biliousness which may or may not have been followed by jaundice: The stools may or may not have at times had the color and consistency of putty accompanied by the putrefactive odor of decaying flesh so common when they have not been mixed with the proper amount of bile.

She may or may not have had spells of severe pain which came on suddenly and after a few hours of suffering accompanied by nausea and vomiting and great depression, passed off leaving her with a feeling of soreness and distention extending over the right side, but the chances are that she will have had all of them and be anxious to know if there is any relief for them or that part of them which she will have had. Physical examination will not be able to demonstrate much except that on the right side, under the edge of the ribs, and about

in a line with the nipple may be found a swelling that is about the size of an egg and very sensitive to the touch especially when the fingers are pressed under the ribs and the patient instructed to draw in a full breath; should she be unable to do so it is almost certain that there is present an inflammation of the gallbladder accompanied or not by stones. If this symptom falls we may notice the presence or not of jaundice of the skin or conjunctivae or the presence of bile in the urine; the finding of these symptoms in a case presenting the other symptoms will almost surely be one of plugging of the common duct by a stone. Our patient may have only a part of these symptoms but tell us of the passage of one or more stones which she will present as evidence in which case if the stones are of ordinary size we may know that they have passed through the natural channels, if they are faceted we will know that there are several of them and that they were lying in contact in the gallbladder.

If unusually large we may have reason to believe they have ulcerated through into the intestines.

In some of these cases we will have typical attacks of bilious colic to be followed in a few days by a discharge of fine sand like material that will prove to us the nature of the trouble though in many of these cases the sand will have become impacted and produce all of the prolonged agony of the larger stones.

The pain instead of being all referred to the region of the liver may be and frequently is referred to the right subscapular region at times existing there without the more severe attacks of colic, in fact it may be safe to say that a tender spot which can be constantly located in the right subscapular region or on the right side of the spine at the level of the 10th or 12th thoracic vertebra and not existing at the same location on the left side almost surely indicates disease of the gallbladder or its ducts.

Referring again to the colicky pains we may quote from one of the latest books which says, "the characteristics of this pain are the abruptness of its onset and the suddenness of its relief. They are incompatible with anything of an inflammatory character, and can only be explained by the sudden entrance and equally sudden exit of a foreign body. The pain endures just as long as the body is moving. If impaction and fixity of the stone occurs, the pain gradually lessens, and at length, probably after a few hours, disappears entirely, to be aroused afresh when a further movement occurs."

Diagnosis. "A tumor beneath the upper part of the right rectus abdominis muscle, with a rounded lower end which is felt to descend when the patient takes a deep inspiration, with a smooth rounded surface, but without any upper margin, the upper part of the tumor disappearing beneath the lower edge of the liver, is a gallbladder tumor."

As said in the earlier part of this paper, you may or may not have pain or jaundice to support this diagnosis. The disease is at first noticed and for a number of years is probably called indigestion but in time the true nature

will show up and there will be little difficulty in a typical case in naming the disease. On the other hand it will be well for the surgeon to bear in mind that it may be simulated by gastric ulcer, carcinoma, duodenal ulcer, appendicitis, diseases of the right kidney, lead colic and the gastric crises of locomotor ataxia.

These different diseases are of course more likely to be confused with cases of true gallstone colic than with the diathesis which causes it and it will be the case very seldom that we will be called to a case of colic that has not for some months or years had symptoms of liver or gallbladder trouble. I would say then that the main point in differential diagnosis between gallstone diseases and the diseases named is the history of preceding disease which has gradually led up to the attack of colic.

Treatment. The treatment of this annoying and dangerous affection may very properly be divided into medical and surgical and it is in the latter form of treatment that the most advance has been made in late years for the reason that abdominal surgery has made the greatest strides forward of all departments of our science, owing perhaps more than anything else to the era of asepsis which has permitted and in fact encouraged investigation in this field. Medical treatment may with advantage be further divided into that proper to be given during the attack, and that to be given between attacks.

During the attack almost all forms of medication have been tried and strange to say none have proven of great benefit unless it be the hypodermic administration of large doses of morphine combined with a small dose of atropine or belladonna. While this is having time to take effect it is well to administer enough chloroform to ease the patient till the morphine is getting in its work; usually this is sufficient to end the attack and no more trouble is experienced until the next attack and then it is the same thing over.

I believe I have seen some benefit from the administration of chloral combined with bromide of potassium, per orem or per rectum, before giving the morphine but there are times when nothing will be retained while the attack is on and in these cases of course the hypodermic medication is the only way to reach the pain except the administration of chloroform to the surgical degree.

Why the pains do not recur after the effects of the medicine have passed off is subject only to the conjecture that the remedies employed have relaxed the passages so that the stone has passed on into the intestine or dropped back into the gallbladder thus terminating the attack. I thoroughly believe that all other means employed to terminate the attack are without avail and useless and my belief is founded on the trial of many of them in cases of all kinds from the mildest to the most severe.

Between attacks something may be done to guard against future attacks though the success of these means is difficult to demonstrate for the reason that attacks are almost sure to recur until the stones are out of the way and it

does not appear that these stones are easily dissolved once they are fully formed, at least not by any remedy at our disposal. It is my belief that while they are soft or in fact merely plugs of hardened bile that various means may be used to cause the bile to become more fluid and thus do much to favor their removal and to prevent the formation of others; should such success attend our efforts we have for the time being at least attained good results.

Foremost among these remedies I would place olive oil and will say here that I usually recommend the so called table oil to the nauseous "sweet oil" sent out from the apothecary shop for the reason that it is much easier taken and gives as good results but I think it of no avail after lime has been deposited with the dried or hardened bile. Quite a number of recoveries have apparently taken place in my practice among younger patients especially, or in older patients soon after their first few attacks and I think due to the use of the oil. Another remedy that I have at times thought beneficial has been sodium succinate, but this is used more in cases having the diathesis not the stones, also in cases of sand formation.

I do not think there is any need of naming the other treatments mentioned in the text books for they have been in use many years and have apparently achieved no results.

Exercise is one of the main remedies to be employed in the treatment of the case before it has gone far but is useless to recommend it in the case of an old chronic so tender and sore that he cannot walk a block without bringing on an attack and it is not common for us to see the case early; however it will do no harm where it can be carried out. In the case of the ones addicted to their use the abuse of corsets and tight lacing is to be eschewed, in fact absolutely forbidden and some form of exercise substituted that will cause the diaphragm to pump the liver up and down freely. At this point I wish to add a word of caution regarding message of the gallbladder with the idea of forcing the stone out into the intestine as it may cause rupture of the bladder itself and so bring on attack of peritonitis that is likely to be fatal.

In matters of diet not much is to be said for the reason that all of the eminent authorities are united in the condemnation of fats while we have in actual experience found olive oil to be one of the best remedies when taken in quantities sufficient.

Treatment, surgical. Much that has been read in the earlier part of this paper has been of a negative nature but when we come to this part practically all that will be said will be in the affirmative for it is here that positive results are attainable and are every day being obtained by operators who may or may not have their hundreds of operations to report; for it is a well demonstrated fact that the country doctor who has learned the technique of aseptic surgery is able in his humble surroundings to duplicate the work of his city brother with the marble operating room and glass topped tables.

The sanctity of the peritoneal cavity, the mysticism of the cranial cavity and even the secrets of the thoracic cavity are now to him an open book so that he who has **clean hands and a clear brain** may delve as far as need be into the secrets of these formerly forbidden localities. The why and wherefore of this is not necessary here to explain for the reason that every writer who has touched on the subject of surgery in the past ten years has preceded his remarks with a peroration of "those illustrious men," etc., not that for a moment I would dim the lustre to which they are justly entitled but I do depreciate the time that is wasted telling of it when all who work in this field are already posted on this part of the subject. In the years that have gone by nature was the one who had to attend these cases except for the little that medicine was able to do and we might well say that while the results were in many cases good they were only achieved after years of waiting and infinite suffering that we have learned in many cases to avoid. But it is well to consider the ways that nature took to relieve the cases and we are privileged to say that she found many of them entirely beyond her power and those cases after a longer or shorter time were doomed to death and this by no means a small share of the whole; in others the gallbladder taking on an adhesive form of inflammation attached itself to the abdominal wall and the inflammatory action still continuing a fistula was formed and the concretions discharged externally; the fistula then healed or not as dictated by the conditions of the ducts inside, if they were free the fistula closed and the subject was well unless future attacks should develop. Thus we have the predecessor of the operation known as cholecystotomy an operation that was for sometime the favorite in this line of work but now has been to a certain extent superseded by operations similar but more extensive.

Another way that nature took to relieve these cases was for the gallbladder to attach itself to the adjacent viscera and the process continuing for the stone or stones to be extruded through the intestines or stomach and work their way out thus leaving a permanent, or not, opening between the viscera and the gallbladder; this was the predecessor of the present operation known as cholecystenterostomy which is one of the best known ways of relieving the trouble for if the common duct has been occluded by adhesive inflammation or the presence of a stone lodged in the duct, and which cannot be removed, the function may still be carried on by the new channel and any future concretions be carried off that way. So far as the surgery of today is concerned there need be no preference accorded to this operation because of impacted concretions for at the time of operations they are supposed to be removed by one of the several means at the command of the operator who has his work at his finger ends.

Another way was for the stones and septic matter to be thrown into the peritoneal cavity by the bursting of the gallbladder death sud-

denly ensuing from septic peritonitis or other means and this destruction of the organ in question has an analogy in the total removing of the gallbladder by the operator of today in case it is found necessary and in fact some of the foremost authorities are at present recommending this as the operation of election as the gallbladder it is claimed is an entirely unnecessary organ merely acting as a reservoir for the secreted bile and holding it until it is called for in the process of digestion.

Taking this to be the case, and the contention is well supported by clinical data, it is strongly recommended for it is a much simpler operation than either of the others named because of the lessened danger of infecting the general cavity and it is a much shorter operation than that of making an anastomosis between the bowel or stomach and gallbladder.

Aspiration of the gallbladder or exploring the same by means of a fine needle while in the cavity and not to be followed by other procedures is only mentioned to be condemned as unsafe, unsurgical and at no time to be performed on the living subject.

Much may be said on the proper time to operate and it is needless to say that we should not wait till the patient is moribund or till the blood has become so mixed with bile that it loses its coagulability; personally I am in favor of the operation being done at an early stage as soon as it has been proven that medicine will not accomplish the desired results for should we wait till adhesions have formed or the stones have been extruded into the liver or adjacent organs the operation may as well not be performed. There is little probability that palliative measures having failed there will ever be relief except by one of the methods named above and why cause the patient to suffer for years totally unfitted for business, a misery to himself and a care for others when we can at the beginning operate on one in the very best of condition that he will ever be.

One of my patients waited ten years, after an operation was advised for this trouble when she was in good condition and fit for the operation, only to die three hours after being removed from the operating table in a neighboring city.

J. W. Myers of Petersburg then gave a very interesting article on **Specific Urethritis**. He believes that the urethra is the most prolific field for the growth of bacteria. That internal drugs exert little if any influence on the bacteria or infection. That urethral injections of astringents are harmful and that rest is the most important therapeutic agent, as is also dilatation one of the most curative factors in treatment.

The paper called forth a good deal of discussion after which the Society adjourned to the annual meeting, to be held at Lincoln, April 27, 1905.

McLEAN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Bloomington the first Thursday of each month. Membership 95.

Officers.

President.....F. C. Vandervort, Bloomington
Vice President A. L. Fox, Bloomington
Secretary-Treasurer.....R. A. Noble, Bloomington
Censors: C. M. Noble, J. E. Fenelon, C. E. Chapin

The regular meeting of the McLean County Medical Society was held Thursday evening, March 2, 1905, at the city hall in Bloomington. The meeting was called to order by the President, Dr. F. C. Vandervort, at 7:40 p. m.

The minutes of the previous meeting were read and approved. Before proceeding with the regular order of business, the president asked the privilege of addressing the meeting. He stated that since the last regular meeting he had addressed a letter to Dr. C. E. Black stating the position of the McLean County Medical Society in regard to the report to the State Society. He also stated that in view of the increased duties of the secretary of the local society, he thought that it would be proper for the society to compensate the secretary for his services as is done in similar societies.

Upon the request of the president the secretary read the following letter:

"Bloomington, Ill., March 3, 1905.

Dr. Carl E. Black,

Representing the Council of the Illinois State Medical Society.

My Dear Sir:

Your visit to the McLean County Medical Society requires that our society make some statement of the matter pertaining to your inquiries on that occasion. The duty falls on me as the executive of our society.

In the first place I will quote what Dr. Weis said to our secretary and what I am also positive he wrote previous to the time of verbal instruction, though the letter can not be produced. I take it that **intent** is everything in this case. Dr. A. F. Kaeser writes, 'He (Dr. Weis) decidedly told me that the local society had to bear the responsibility should any deficit occur and again I will say that he told me that it had been customary, but not compulsory, for the local society to turn over any surplus to the State Society. He told me that the State Society made no allowance to the local society for hall rent, etc.'

These forceful statements from the secretary of the State Society threw us entirely upon our own resources, hence our independent attitude. From the time of this communication we relied entirely upon our own ability to supply ways and means.

These matters were discussed in our society and we proceeded to appoint what we named an executive committee, and by which name it is known all through its existence. This committee made regular reports to the local society, both at regular and adjourned meetings. Our records show all these meetings and the reports of progress. The fact is we made our whole society a committee of arrangements; and the executive committee, the State Society

adopted as its own committee of arrangements by publication.

Correspondence between the machinery of an upper society and a lower society does not make an act an appointment of the lower society a part or act of the upper society, **unless the lower society does the act and makes the appointment with this intent and purpose.** On the opposite or any other construction, the upper society might by overlapping our society levy upon and appropriate any committee which we appoint. In a word the executive local management committee, was not a part of the State society, no matter what the State society's constitution might say, unless the local McLean County Medical Society appointed it as such. The county society did not appoint it as such and the gentlemen did not accept it as such. The reasons why the local society was thrown upon its own resources and did not appoint it as such, lie in the official and hence valid and binding communications from the State Society.

This committee, whom you so urgently request to make a report to the State Society, had made its report to its source of authority and has been discharged, hence any report must come from the local society.

We therefore have the honor to report that the meeting of the Illinois State Medical Society held in Bloomington, May, 1904, was carried through successfully. We are satisfied with the result and would extend our greetings to the State Society and bid it God speed for the future. We feel that we are right and also that in so far as this society is concerned, the 'incident is closed.'

Very respectfully,

President McLean County Medical Society."

It was moved and seconded that the letter to Dr. Black, be approved by this society and a copy sent to Dr. Black as our final answer to the State Society, which motion carried.

Communication from Dr. E. W. Weis, regarding the sending of notices to each component society of the Illinois State Medical Society, read and ordered placed on file.

The credentials of Dr. Bernice Curry, member of the Tazewell County Medical Society, and of Dr. J. N. Thresh, member of Effingham County Medical Society, presented and these members were duly transferred from their respective societies to the McLean County Medical Society. Ordered that minutes show notice of such transactions.

In reply to the communication sent to Dr. Jas. Whitney Hall, regarding the statements appearing in the State Journal and the Chicago Inter-Ocean, the following letter was read:

"To the Honorable Board of Censors,
McLean County Medical Society,
Bloomington, Illinois.

Gentlemen: In reply to your communication of January 31, I beg to say that I am very glad, indeed, to be heard on the subject under discussion, and in the very outset of this statement I want to assure you gentlemen, and through you, the members of the McLean County Medical Society, that whatever I may have said that

was construed as derogatory to your society was said without deliberation and most positively with no intention of casting any reflection on the Society or any of its members.

I had not read the article referred to until after receiving your communication yesterday, but I now recall the occasion of the remarks very clearly. It was at a meeting of the Chicago Physicians Club, before which there was a heated discussion of the articles that had recently appeared in the Chicago Tribune relative to the 'division of fees.' I was at the Club as an invited guest and was very unexpectedly called upon to make a talk. In the course of my remarks I remember that I stated that I was not very well posted as to medical ethics just at that time, as I had several years previously withdrawn from the McLean County Medical Society and had been recently reinstated. I spoke in the same connection, of the McLean County Medical Society having its schedule of prices, which I was quite sure that all the members (including myself) had not lived up to. I did not state why I withdrew from the society, but allow me to assure you that I had no intention of leaving the impression that I did withdraw on account of the schedule of prices or anything pertaining to fees.

I will make no attempt at this time to quote you the exact language I used in the talk, for my remarks were essentially extemporaneous and I put no special import on the matter at the time. But now I can readily see how any discussion of my withdrawal from your society, on account of your schedule, which you gentlemen and your entire society know is not true.

In conclusion, however, I wish to most humbly apologize to you for anything I have said or done that in any way reflects in the slightest degree on the professional honor or your most excellent society.

Trusting that this explanation will be satisfactory and that my apology will be duly accepted, and with high personal regard for you gentlemen, I beg to remain,

Yours very truly,

Jas. Whitney Hall."

The Board of Censors sent the following letter to Dr. Hall in reply to the above:

"Dr. Jas. Whitney Hall,
Chicago.

My dear Doctor: Replying to your letter of recent date, I wish to state to you that since the receipt of your letter, the Board of Censors have consulted with the members of the society, who have expressed themselves as dissatisfied with the apology you offer.

I can safely say to you, that nothing short of a public denial of the statements which appeared in the official organ of the Illinois State Medical Society, credited to you at the meeting of the Chicago Physicians Club, will be considered as sufficient apology by the members of the McLean County Medical Society. I would suggest that such an apology of denial or retraction be made before the Physicians' Club and an open letter to the Illinois State Medi-

cal Journal written by you, stating that you apologize to the society for the statements you made before the Physicians Club which reflected upon the professional honor of the McLean County Medical Society.

Awaiting your prompt reply, I beg to remain,
Fraternally,

Chairman of Board of Censors."

Following the reading of the above letters, Dr. Hall, who was present, addressed the society and stated that the reporter must have confused his statements as he most positively did not make the statements in the manner in which they were credited to him. After considerable discussion, it was moved and seconded, that the apology of Dr. Hall be accepted and his letter to the Board of Censors appear in the notes of this society and be published in the Journal of the State Society.

The following bills were allowed: Nimrod Mace, for printing, \$9.50; R. A. Noble, \$9.85.

Dr. W. E. Guthrie, the essayist of the evening, presented a most instructive and enjoyable paper on **Surgical Tuberculosis** limiting his paper to some of the forms most frequently met with. He advised the relegating of drugs to the rear, and depend solely on rest, plenty of fresh air and an abundance of good food. Nutrition must be maintained, otherwise the patient can not hope to make a recovery. The doctor was of the opinion that all early cases of tuberculosis could be cured by the above routine practice.

The paper was freely discussed and the doctor complimented on his excellent production.

MORGAN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Jacksonville the second Thursday of each month.

Membership 42

Officers.

President J. W. Hairgrove
Vice President Josephine Milligan
Secretary David W. Reid
Treasurer.....E. F. Baker

The Morgan County Medical Society met Friday, March 9, 1905, at the Public Library. There were 21 members present, with President Hairgrove in the chair.

The general subject for the evening was **The Business Side of Our Professional Work.**

On the subject of **Charges and Collections in the County**, Dr. W. G. Maness said that he would rather forget some of his country experience. It was very difficult to collect in the country and that he found doctors in the city more independent than in the country. One trouble was that the people in the country thought that a doctor should make a visit no matter what kind of weather or how far, and if he tried to collect his pay he made an enemy of not only one, but of the whole community.

He said that it was harder to get a doctor in Jacksonville out at night than it was in the country, where there are only one or two doctors in the neighborhood, and although the country doctor might seem to have a monopoly, he did not exercise the same independence that the city doctor did. In the country the

people would try to pay the doctor with anything they could not sell or would always charge them more for anything they had to sell, than they could get anywhere else for it.

His experience about Nortonville was that the doctors in that part of the country did not get more than fifty cents (\$.50) a mile, if as much.

Dr. Hardesty said that his experience differed from that of Dr. Maness. That in his practice in Calhoun County, in this State, he got much higher prices than those named by Dr. Maness. He said that the medical societies were not a unit in this matter, that specialists seem to charge all they can get; this at least is the idea of the laity. A physician cannot even guess as to what a specialist will charge for an operation which the physician advises. In his neighborhood the financial condition of the community was excellent and he thought he collected 90% of his charges. In the villages where he worked the collections were not so good.

His fees were from fifty cents (\$.50) to a dollar (\$1.00) at the office, country drives from one mile to five miles one dollar and fifty (\$1.50) cents to two dollars and fifty (\$2.50) cents; day visits, one dollar in town and night visits one dollar and fifty (\$1.50) cents. Obstetrical cases were ten (\$10.00) dollars, including a second visit.

Dr. McLaughlin said that his practice was mostly in the city, that he did not do much country work. His charge for ordinary calls was one dollar and fifty (\$1.50) cents to three (\$3.00) dollars per visit; night visits two (\$2.00) to five (\$5.00) dollars. Anything after supper, unless laid over for his own convenience, was counted as night work. Consultation charges ten (\$10.00) dollars to twenty-five (\$25.00) dollars; obstetrical cases from fifteen (\$15.00) dollars to twenty-five (\$25.00) dollars in uncomplicated cases, and as high as one hundred (\$100.00) dollars in complicated cases. In fact, he said, that no charge was too great for successful work done in a complicated case of labor where the life of the mother or child is at stake.

For nose and throat work he made it a rule to state his charge in advance for a cure or course of treatment, part of that to be paid in advance. In this way only could he secure proper attendance at the office on the part of the patient.

Dr. Pitner's subject was **The Telephone**. Dr. Pitner said that the telephone had grown from a convenience to a necessity, and to a certain extent an annoyance. We cannot practice without the telephone now; still the very existence of the telephone distracts the physician. The abrupt methods used in telephone calls is very trying; the urgency of the call by telephone, the "hurry up" the "right away" is often more than a physician can stand. He never answers a telephone call where the number of the house is given merely, without knowing who he is going to see and something about them.

If an urgent call is given by telephone the patient must give some reason for the urgency and the Doctor must judge of its validity. The doctor's work must be systematized; he cannot allow himself to be diverted by every telephone call from his office work. He is not only under obligation to the one at the telephone, but to those waiting in his office.

Calls during meal hours are very trying and sometimes even seem to be planned intentionally. The doctor should refuse to call up patients to report, he should let the patient call the doctor and report.

When called for advice to the telephone he charges a small fee, according to the time spent, etc. No patient can get ahead of his turn in his office by telephoning for medicine and sending for it.

Dr. Milligan said that the telephone often makes life a burden to the doctor and although we cannot live without it, it sometimes seems difficult to live with it. Her rule is to charge in the lump for telephone messages and not keep a separate account of each message, but add a general charge to the bill for advice by telephone, etc.

Dr. Black thought it would be an advantage to the general practitioner to do as surgeons do: to charge for a case of pneumonia or typhoid fever without recording each visit. In his surgical work it is very difficult to give prices, although they are often called for in advance.

The average fee for a simple laparotomy is perhaps two hundred (\$200.00) dollars in central Illinois. He grades the price generally with the ability of the man to pay. Where nothing can be learned of this ability he sometimes grades according to the patient's accommodations at the hospital, whether in the ward or in a high priced room.

The actual fee for a major operation varies from nothing to five hundred (\$500.00) dollars. Where he finds that a patient is "out shopping" he tries to name a higher price than any of his friends consulted.

Dr. Hairgrove said that he charged for an average laparotomy about two hundred (\$200.00) dollars. Taking appendicitis as an illustration; a good many paid him from one hundred (\$100.00) dollars to three hundred (\$300.00) dollars. For some cases he got more than this and for some he got nothing. For gall stone operation or hysterectomy the charges were very similar. For a cervix or hemorrhoid operation about fifty (\$50.00) dollars to seventy-five (\$75.00) dollars he usually charged.

Dr. Reid gave some figures from his own books which he said he thought might be of interest to those doing the same work as himself.

During the last two months, for ordinary office consultations, he had charged fifty (\$.50) cents seventy-eight times; seventy-five (\$.75) cents sixty-three times and one (\$1.00) dollar eighty-six times, that is, he charges one (\$1.00) dollar oftener than any other amount, and the

average charge is not far from seventy-five (\$.75) cents.

As to city visits, during these two months, he had charged one dollar and fifty cents (\$1.50) for each of forty-four visits and two (\$2.00) dollars for each of sixty visits.

For obstetrical work he took the year 1904 as a basis. For eleven cases he charged ten (\$10.00) dollars; for thirty-four cases he charged fifteen (\$15.00) dollars; for fourteen cases he charged twenty (\$20.00) dollars and for seven cases he charged twenty-five (\$25.00) dollars or more.

That is, for fifty-five cases he charged fifteen (\$15.00) dollars or more, and for eleven cases, or one-sixth of the whole, less than fifteen (\$15.00) dollars. His average charge for the sixty-six cases, or the year's work, was sixteen dollars and thirty cents (\$16.30.)

To show the ratio of charges to collections he took the work of the last four years. When he makes a visit, or does any work, he enters on his books the full charge without any discounts. The aggregate of these charges, year after year, as compared with the amount actually collected, is approximately as 10 to 7; that is, in the long run he collects about 70% of the amount charged.

Part of what he earns one year is collected the next, but year after year, the percentage is about the same. The average for the four years was almost exactly 69%.

Dr. Adams said that it was a mistake to have the patients think they were paying for medicine; advice was what they are paying for and the medicine is incidental.

In chronic cases he laid out a course of treatment with an advance charge, as for instance, in the treatment of granular lids and told them that it would cost them so much, say twenty-five (\$25.00) dollars. The patient under these circumstances was likely to come until the case was cured.

He said that he made a record of every case, with the name and treatment, and found that that in itself had a good effect on the patient. Before the record was completed the patient would usually tell the doctor if he had any money or not, and that gave the doctor an opportunity to settle the money question before going any farther. By better business methods he now collects 90% where he formerly collected about 50%.

Dr. Wharton spoke of the different ways of collecting, and thought a collector was a very good plan. He sees no reason why the physician should not collect his fees and bills the same as a grocer.

Dr. Duncan asked for information concerning amount of prescription business done. He said that in Alabama he never handled an ounce of medicine and never received less than two (\$2.00) dollars for a prescription and from three (\$3.00) dollars to five (\$5.00) dollars if he went outside of his office; for getting out of bed not less than five (\$5.00) dollars cash in hand. He said that if one physician refused to go you could not get another.

DECATUR MEDICAL SOCIETY.

Regular meetings are held in the Decatur Club Rooms the fourth Tuesday of each month
Membership 62.

Officers.

President.....Lynn M. Barnes, Decatur
Vice-President.....Clara Garber, Decatur
Secretary-Treasurer....W. C. Bowers, Decatur
Board of Censors: E. A. Morgan, F. M. Anderson, J. Stebbins King.

Program Committee: W. C. Bowers, Chairman;
E. J. Brown, W. C. Wood, A. Wilhelmy, L. M. Barnes.

Delegate to the State Society: Cass Chenoweth,
W. C. Bowers, E. J. Brown.

The Decatur Medical Society was called to order at 8:00 p. m. in the Decatur Club Rooms by the President, Lynn Barnes.

R. L. Walston read an excellent paper discussing R. L. Morris' paper on syphilis, which was read at the February meeting. Other members took part in the discussion, R. L. Morris closing.

John T. Miller read a paper on Intestinal Intussusception in Infants, and showed an excellent specimen. Will Wood and H. C. Jones very ably discussed the paper, other members also participating. Nineteen members were present.

The annual banquet will be held on April 25th at one of the hotels. A Chicago man will probably be procured as speaker for the evening.

The officers for the coming year will be elected at this April meeting.

W. C. Bowen, Secretary.

PROGRAM.**Section Two.****SURGERY, SURGICAL SPECIALTIES AND OBSTETRICS.**

Chairman.....George L. Eyster, Rock Island
Secretary.....William H. Wilder, Chicago

Address—**FERNAND HENROTIN, Chicago.**

The Commerce of Surgery.

Symposium on Surgery of the Upper Abdomen, Surgery of the Duodenum.....

(a) Surgery of the Stomach.....
.....Arthur Dean Bevan, Chicago

(b) Surgery of the Bile Tracts.....
.....Carl Black, Jacksonville

Abs—Character of inflammatory disorders of this region and their origin. Such disorders lead to obstruction; interfere with natural drainage. The problem is to restore drainage before permanent or irreparable damage is done. Can this be safely done medicinally? Can early operation accomplish the result better? Operations are made to remove foreign bodies and secure drainage or both. Should all cases be operated as soon as diagnosis is made; if any, which cases will recover spontaneously, and which will progress unfavorably? An examination of the signs and symptoms as a basis for early diagnosis. Operation really a preventive measure by which extension of disease and complications are avoided.

(c) The Emergencies of Pancreatic Surgery.
.....Weller Van Hook, Chicago

Abs. The paper will discuss the emergencies arising in pancreatic hemorrhage, supuration, necrosis and inflammation. Especial attention will be given to the morbid anatomical character of the conditions requiring recognition in the emergencies of practice, and to their surgical management.

(d) Surgery of the Duodenum.....
.....Emerson M. Sutton, Peoria

Abs. Possibilities of, limited as follows: Early diagnosis necessary. Inducements to diagnosis lacking, as compared to appendicitis and gallstones. Difficulties of diagnosis. Medical treatment efficient in non-perforative cases, but requires patient conduct. Gastro-jejunostomy, an aid to cure ulcerative duodenitis by securing rest. Results promising, but time must elapse before surgical treatment can claim its superiority.

Case—Multiple small ulcers of the duodenum. Duodenitis, death without operation.

(e) The Surgical Treatment of Injuries to the Spleen due to Subcutaneous Penetrating Wounds; the Value of Splenectomy in Certain Anemias Associated with Enlargements of the Spleen....M. L. Harris, Chicago

2. Surgical Tuberculosis.....
.....Wm. E. Guthrie, Bloomington

Abs—A comparison of the functions of the physician and surgeon in the care of the tubercular.

The methods of the bacilli in their warfare with the vital forces.

The tissues involved in the disease.

The origin, course, treatment and prognosis of tuberculosis in the most important organs of the body.

General treatment of the tuberculous, with special reference to the promotion of physical vigor by means of suitable food, fresh air in abundance, rest of the part involved, little medicine and no unnecessary surgical interference.

3. Tubercular Nephritis, Review of Literature, and Report of Case.....
.....Robert Christie, Quincy

Introductory—Review of literature with reference to comparative frequency, more recent investigations and observations, discussion of modes of infection, primary, secondary, metastatic atypical cases, without characteristic symptoms, other than localized tumefaction. Report of case, operation, primary abdominal nephrectomy. Recovery.

4. Report of Cases....S. C. Plummer, Chicago

(a) Stricture of the oesophagus following typhoid fever. Typhoid fever with severe relapse, symptoms of stricture immediately following. Treatment by sounds. Gradual tightening, until swallowing even of water impossible. Anesthetic, unsuccessful attempt to pass stricture. Performance of gastrotomy. Relaxation of stricture after four months of absolute closure. Dilatation of stricture. Operation for closure of gastric fistula.

(b) Colloid Carcinoma of Cecum. Operation for appendicitis three years previously. Excision of cecum and ascending colon, with lateral anastomosis by Murphy Button of Ileum to transverse colon. Recovery from operation with restoration of health, followed by recurrence.

(c) Penetrating Wound of Liver. Injury by small missile, a portion of a dynamite cap. Laparotomy, foreign body not found. Evidently embedded in liver. Closure of wound in liver. Recovery without complications.

(d) Gastro-Enterptosis. Symptoms simulating appendicitis. Transverse colon found in shape of letter V. Gastro-hepatic omentum abnormally long. Gastro-hepatic omentum and transverse Meso-colon, each folded upon itself and stitched. Permanent relief of symptoms.

5. Congenital Club Foot..... John Ridlon and Chas. E. Eikenbury, Chicago

Abst—This paper will briefly discuss the varieties of the congenital club foot. The anatomy of congenital equino-varus, and the theories of its causation. The paper will chiefly discuss the subject of treatment by manipulation, by braces, by the Thomas Wrench by handmodeling, with the patient anaesthetized by the Granton osteoclast, by simple tenotomies supplemented by modeling, or the use of the wrench, or the osteoclast by the Phelps's open incision and Jonas's modification of it, and by linear and cuneiform osteotomies, and enucleation of the astragalus. The methods of after treatment by plaster splints and by braces will be briefly considered, and the statistics of Dr. Ridlon's cases for the past twelve years will be given.

6. Subject to be announced later.....D. W. Graham, Chicago

7. Some Errors in the Diagnosis of Abdominal Troubles.....Clifford U. Collins, Peoria

Abst—The difficulties in the way of a correct diagnosis of the five senses possessed, the examiner is compelled to make a diagnosis in most cases on what he learns by the use of a minority of them, feeling and hearing. Any method by which these two senses may be corroborated by a third, the sight has been promptly utilized by the profession, as the X-ray, small electric lamps for illuminating accessible mucous cavities and the exploratory incision. Some patients are excessively tender, and others stoical in palpation, while some exaggerate every symptom, and others minimize them. In spite of these difficulties, the percentage of errors is very low. The keeping of case records is very helpful to avoid repeating errors. Cases reported of cholecystitis being mistaken for appendicitis; of a pregnancy for a fibroid tumor; a ruptured tube for an extra uterine pregnancy (?), for an inflamed appendix, and a femoral hernia for an inguinal hernia.

8. Symposium on Surgery of the Nervous System.

(a) Diagnosis and Pathology of Neoplasms of the Brain.....Hugh T. Patrick, Chicago

Pathology—Most frequent tumors are glioma, sarcoma, and solitary tubercle. Enumeration of less frequent forms. Stricture, manner of growth, and physical properties of more frequent tumors.

Diagnosis—Determination of intercranial neoplasms generally easy. Exact localization generally difficult. Frequently impossible. Classical symptoms of brain tumor and points of differential diagnosis. Typical symptom groups. Tumor simulating apoplexy. General paresis, arterio-sclerosis. Nephritis, migraine, etc. Symptoms indicating seat of growth.

(b) Surgery of Cerebral Neoplasms.....L. L. McArthur, Chicago

Abs—Since but two per cent of all cerebral tumors are operable, either because of character, situation, or size, the promise from surgical interference can never be great. Increased hopefulness for the future, due to better localization, earlier operation, improved technique, better post operative therapeutics. Neither slowness of symptoms, absence from pain, nor excessive cranial involvement reasons for refusing operation. Summary of cases.

(c) Insanity Following Skull Injuries.....E. Mammen, Bloomington

Abs—Contusions, concussions, location of injuries, fractures, symptoms. These are some times slow in development. Changes in tissue at site of injury, operations, relief from pressure, relief by removal of changed tissues, and of cirrhotic bone. Cases. Results.

(d) Cerebral Infection from Middle Ear Disease.....Norval H. Pierce, Chicago

Abs—Statistics. Anatomical paths by which suppurations within the temporal bone reach the contents of the calvarium. Character of the primary inflammations which produce intra-cranial complications. The influence of locality of the primary inflammation on the different intra-cranial complications. Purulent inflammations of the dura, and the extra-dural abscess. Otitic pachy-meningitis interna. Meningitis and meningo-encephalitis serosa following suppuration within the temporal bone. Phlebitis and Thrombosis of the dural sinuses and the jugular vein. Isolated thrombosis of the jugular bulb. The otitic brain abscess.

(e) Pathology and Diagnosis of Lesions of the Spinal Cord and Peripheral Nerves....Frank P. Norbury, Jacksonville

1. Diagnosis is dependent upon.

(a) Familiarity with neurological anatomy and physiological function of individual parts. (Essentials reviewed.)

(b) Familiarity with gross and special pathology. (Essentials reviewed.)

2. Surgical Spinal Lesions discussed.

3. Peripheral Nerve Lesions discussed. New discoveries in scientific investigation of nerve and anastomosis growth and repair, and the promising future offered neurological surgery.

(f) Surgery of Spinal Cord and Peripheral Nerves.....J. B. Murphy, Chicago

9. Subject announced later.....
.....Albert I Bouffleur, Chicago
10. Subject announced later.....
.....W. L. Baum, Chicago
11. Infectious Urethritis of the non-gonorrheal type.....F. Kreissl, Chicago
12. Syphilis (Detailed title announced later)
.....Alfred Schalek, Chicago
13. Perigastric Adhesions After Gallstone Operations. Their Surgical Importance, and a New Operation for Their Relief.....
.....E. Wylls Andrews, Chicago
- Abs—Adhesions inevitable after operation, and occasionally without operation. Often harmless. Sometimes cause symptoms like recurrence of stone. Colon adhesion to liver common and harmless. Stomach sometimes adheres in a way disastrous to its function. Author's method of sewing colon and omentum between stomach and liver, after separating bad adhesions to prevent their re-forming.
14. The Cases Demanding the Removal of the Eye of Interest to the Surgeon and Physician.....J. Brown Loring, Chicago
- Abs—Responsibility of the Ophthalmological Surgeon and Physician. Illustrative cases. Influence on the general health. Development of the orbit. Society and text book literature. Operations.
15. Some Considerations Relative to Phlegmon of the Orbit...Charles H. Bard, Chicago
- Abst—Comparative frequency in young and older subjects. The commoner causes and the ages at which they are most active. The importance of early diagnosis in view of the gravity of the disease, as also for the reason that the destruction of vision is apt to be out of proportion to the severity of the symptoms. Explanation of the amaurosis. Affections with which orbital phlegmon is often confounded, and the manner of differentiating. Methods of treatment, particularly surgical.
16. The Indications for Opening the Mastoid Process in Cases of Empyema of the Cells Following Acute Otitis Media, Where There is an Absence of Signs Over the External Surface of the Mastoid.....
.....George E. Shambaugh, Chicago
- Abst—Empyema of the Mastoid Cells a serious condition. The indications for operative interference may be obscure and difficult to interpret. The familiar picture of mastoid abscess, with swelling over the process. The cases of mastoiditis with no signs over the process. Anatomical conditions in the mastoid which explain such cases. The indication for opening the cells in cases of acute mastoiditis where there is an absence of changes over the posterior surface process.
17. Symposium. Lacerations of the Obstetrical Canal Resulting from Obstetrical Injuries.
(a) Pathological Anatomy
.....J. Clarence Webster, Chicago
- Abst—Rupture of uterine body. In majority of cases lower uterine segment is ruptured. Upper segment may be torn when wall is degenerated or weakened from old cicatrix. Normal relationships of these segments ex-

plained. Variations in size, character and situation of ruptures considered. Effects of fetus described. Lacerations of cervix described. Anatomic changes during labor illustrated by frozen sections. Sites and degrees of lacerations described. Consideration. Lacerations of the Vagina. Anatomic relationships during labor, described. Nature of various lacerations described. Involvement of neighboring tissues considered. Lacerations of Perineum. Relationships to pelvic floor considered. Importance of analyzing structural composition emphasized. Variations in lacerations described.

- (b) Causes and Prevention.....
.....F. H. Kimball, Rockford
- (c) Diagnosis and Treatment of Rupture of the Uterus.....George Schmauch, Chicago
1. Nature and place of tear.
2. Perforating; non-perforating; peritoneal fissures; necrosis.
3. Importance of etiology.
4. Rupture during labor and after.
5. Frequency and mortality.
6. Symptoms of rupture. Their diagnostic value.
7. Fatal hemorrhage. Sepsis, principal danger.
8. Their influence upon treatment.
9. Choice of treatment influenced by
 - a. Nature of rent.
 - b. Surroundings of patient.
 - c. Skill of physician.
10. Various methods. (Operative and expectant). Their indications and results. Technique.
11. Pregnancy following rupture. Prognosis and treatment.
- (d) Lacerations of the Vaginal Portions of the Uterus and Fornix Vagina.....
.....L. H. Nickerson, Quincy
- Historical Sketch—Emmet's fame established and the originator of the operation for a lacerated cervix, the first operation being performed by him Nov. 27, 1862.
- Causes:—The act of parturition with rigidity of the cervix; early application of the forceps while the head is within the body of the uterus; a rapid second stage; any disease causing friability of the cervix; forcible dilations in abortion; just proportion of the fetus as compared with the cervical outlet. Meddlesome midwifery.
- Diagnosis:—By the same sense of touch and inspection the diagnosis of a lacerated cervix is easily made. The erosions and ulcers of the old writers is now known as a misnomer. When in doubt, preliminary treatment clears up diagnosis and excludes cancer of the cervix.
- Treatment:—The prophylaxis consists in abstaining from all measures calculated to hasten the second stage of labor; from the application of the forceps before the cervix is fully dilated; from the use of ergot, and from meddlesome midwifery. On the other hand, we should favor those drugs that assist dilatation. When the cervix is lacerated an early operation should be made.

Prognosis:—In neglected cases we will have endometritis, metritis, and inflammation of other pelvic organs, with all their varied symptoms. Cancer of the cervix may be a sequela of. On the other hand, with the technical operation performed, these are all avoided, and the patient restored to health.

Operation:—The instruments all arranged aseptically, the patient anesthetized; curettement of the endometrium; irrigation of the vagina and genitals; denuding of the hyperplastic, congested lips of the cervix in such manner as to secure perfect apposition; introduction of the sutures; their removal with the aid of Sim's speculum; when the tear extends beyond and into the vagina, the cicatricial tissue should be removed, and the sutures extended into the fornix.

(e) **Diagnosis and Treatment of Lacerations of the Vaginal Body, and of the Perineal Region, Including the Pelvic Diaphragm.**.....C. S. Bacon, Chicago

Abst—Immediate examination and repair desirable unless contra-indicated by the condition of the patient. Diagnostic meaning of bleeding during distention of the outlet. Extent of injury frequently underestimated. Repair of small tears may be made without anesthetic, with patient on bed with hips elevated on douche pan. All other tears should be repaired with patient anaesthetized on table. Technique of vaginal and perineal suturing.

18. **The Value and Place of Duodeno-Choledochotomy in Gall-Stone Surgery.**.....John C. Hancock, East Dubuque

Historical Sketch of the Operation:—More cases reported and collected than hitherto. Description of variations of methods of removing stones from the common duct via duodenum. Scope and indications of the operation. Advantages and disadvantages of the operation, with reference to technical and mortality features. Substitutes for the operation. Retro-duodenal-choledochotomy and supra-choledochotomy. Report of author's case.

19. **Post Operative Complications.**.....Daniel M. Eisendrath, Chicago

Abst—Enumeration of the various post operative complications. Acute sepsis, pulmonary embolisms, aspiration pneumonia, hematemesis following abdominal operations. Uremic diabetic coma, gangrene, cholemia, hemorrhage, acetoneamia, intestinal adhesions. Which are avoidable and which are unavoidable. Some cases are in the broader line. Discussions of the avoidable complications. The unavoidable post operative complications. Report of cases.

20. **Title announced later.**.....Thomas J. Watkins, Chicago

21. **Inversion of the Uterus, with report of Cases.**.....P. L. Markley, Rockford

22. **Bronchoscopy for Removal of Foreign Bodies from the Air Passages.**.....E. Fletcher Ingals, Chicago

Abst:—Previously reported cases. Removal by upper and lower routes. Description of in-

struments used. Illumination by electric lamps as in urethroscopy. Danger that when tube is introduced into bronchus of affected side, it may shut off air from the other lung. Use of small opening in tube to keep tube free from pus and mucus. Report of recent case. Emergency device for removing the foreign body.

24. **Acute Dilatation of the Stomach.**.....A. E. Halstead, Chicago

25. **Tuberous Sub-Chorial Hematomata of the Decidua.**.....S. R. Hopkins, Springfield

1. Report of cases from same uterus, following a Caesarian section with ligation of both tubes.

2. Microscopy of the specimens.

3. General remarks on etiology.

Marriages and Deaths.

Marriages.

Travalo Chester Coggeshall, M. D., Henry, Ill., to Miss Jessie McCann of Champaign, Ill., at Peoria, Ill., February 11.

Wm. Englebach, M. D., Arenzville to Miss Faina L. Reynolds of Barry, at Quincy, March 30.

Henry Robert Gledhill, M. D., to Miss Cornelia Wyckoff Newton, both of Jerseyville, Ill., March 3.

John M. Gulick, M. D., Manteno, Ill. to Miss Zella M. Irwin of Peterborough, Ont., at Manteno, March 9.

Robert W. Oakley, M. D., to Miss Grace C. Crawlley, both of Moline, Ill., March 6.

Archibald C. Sheppard, M. D., Glen Carbon, Ill. to Miss Wilhelmina Beyerbach of St. Louis, March 21.

H. John Stewart to Miss Ethel Weaver, both of Chicago, March 2.

Deaths.

D. F. Morenzy, M. D., of Decatur, for fifty years a practitioner of Decatur, died suddenly April 8, aged 78.

George W. Edison, M. D., London University, 1842, during the Civil War city physician of Quincy, Ill., and surgeon on hospital boats on the Mississippi, died from cerebral hemorrhage in the hospital of the Soldiers' Home, Quincy, March 10, aged 78.

Milton Jay, M. D., Eclectic Medical Institute, Cincinnati, 1859; Rush Medical College ad eundem 1895; a member of the American Medical Association; a life member of the Chicago Medical Society; for twenty years chief surgeon of the Chicago and Eastern Illinois Railroad, died at his home in Chicago, April 1, from exhaustion following influenza, after an illness of three months, aged 71.

John W. Gamwell, M. D., Berkshire Medical College, Pittsfield, Mass., 1852. formerly of

Princeton, Ill., but for the last sixteen years a resident of Pittsfield, Mass., sometime select-man of Torrington, Conn., and in 1876, a member of the state legislature, died at Daytona, Fla., March 26, from asthma, aged 74.

David E. Ellis, M. D., Geneva, (N. Y.) Medical College, 1843, formerly of Belvidere, Ill., died at the Illinois Northern Hospital for the Insane, Elgin, March 18, from senile gangrene, aged 85.

Franklin Kimball Burr, M. D., Rush Medical College, Chicago 1895, died at his home in Englewood, Chicago, Feb. 20, from cerebral hemorrhage, after an illness of eight days, aged 36.

James H. Parcel, M. D., Years of Practice, Illinois, 1878, of Westfield, Ill., died at Anna, Ill., March 16, after a long period of invalidism, aged 76.

Oliver H. Irwin, M. D., Medical College of Indianapolis, 1870, formerly of Sheldon, Ill., died at Elk City, Okla., March 23.

James Johnston, M. D., Medical College of Ohio, Cincinnati, 1872, died at his home in Hudson, Ill., March 26, aged 60.

William Harvey Walford, M. D., Chicago, 1885, died at his home in Chicago, March 29, aged 46.

Frank Newell Armstrong, M. D., Rush Medical College, Chicago 1890, of Richmond, Ill., died suddenly in Morris, Ill., from heart disease, March 13, aged 38.

Wm. E. Treadwell, M. D., Chicago, 1884, of Maple Park, Ill., died in Elgin, Ill., March 17, from cerebral hemorrhage, after an illness of one week, aged 54.

J. Ridgely Simms, M. D., of Waukegan, Wis., formerly of Jacksonville, Ills., died recently in that city.

G. W. Edison, M. D., of Quincy, aged 78, died March 10th, at the Soldiers' Home.

David LeRoy, M. D., Medical College of Ohio, Cincinnati, 1848, major and surgeon of the Ninety-first Illinois Volunteer, Infantry during the Civil War, died at his home in Streator, Ill., February 27, from senile debility, aged 83.

Luther C. Bean, M. D., a graduate of Vermont Medical College, Woodstock, 1849, the oldest practitioner of Waukegan, Ill., died at his home in that city from pneumonia, February 22, aged 84.

Dr. A. C. Williamson, of Urbana, a graduate of the Pulte Medical College of Cincinnati, 1879, died in his office April 8.

King George Must Have Been an Apothecary.

Patrick Henry had just exclaimed: "Give me liberty, or give me death!"

"Sorry," replied George III, "we're all out of that, but I can give you something just as good."

This is the true history of the American revolution.—New York Sun.

FOR SALE—One 24 Plate Birtman Static Machine with all appliances and 3 X-Ray tubes, in fine condition. Will sell cheap. Address J. H., care Ill. Med. Journal.

News Items.

Elgin Physicians Threaten a Strike.

Many Elgin physicians are protesting that the \$50 rate set for post mortems is too low. One physician speaks of it as "an insult to the medical fraternity to offer such a low price for the skill, time and the dangers which the physicians lay themselves liable to." It is said the majority of post mortems come from coroner's cases, and are those in which legal proceedings follow, taking the doctor's time from his practice; often for many days.

Dr. H. H. Brown, of Chicago is traveling in Southern Europe.

Dr. C. E. Flautt has moved from Otterville to Niotaze, Kans.

Dr. A. L. Vollborn has located at Alexander.

Dr. John R. Pierce of Cornland, Logan Co., has removed to Iuka.

Dr. J. M. Barker has located at Cornland, having purchased the property and practice of Dr. Pierce.

A New Hospital at Rock Island.

The war department officials have under consideration the project of a new hospital building at the Rock Island arsenal to take the place of the present one which is said to be a disgrace. About 100 enlisted men and 2,600 employes of the arsenal require hospital facilities.

Dr. Arthur Van Buren, of Chicago, has located in Camp Center, S. D.

Dr. Edward Duke, of Danville has bought a practice at Coin, Iowa.

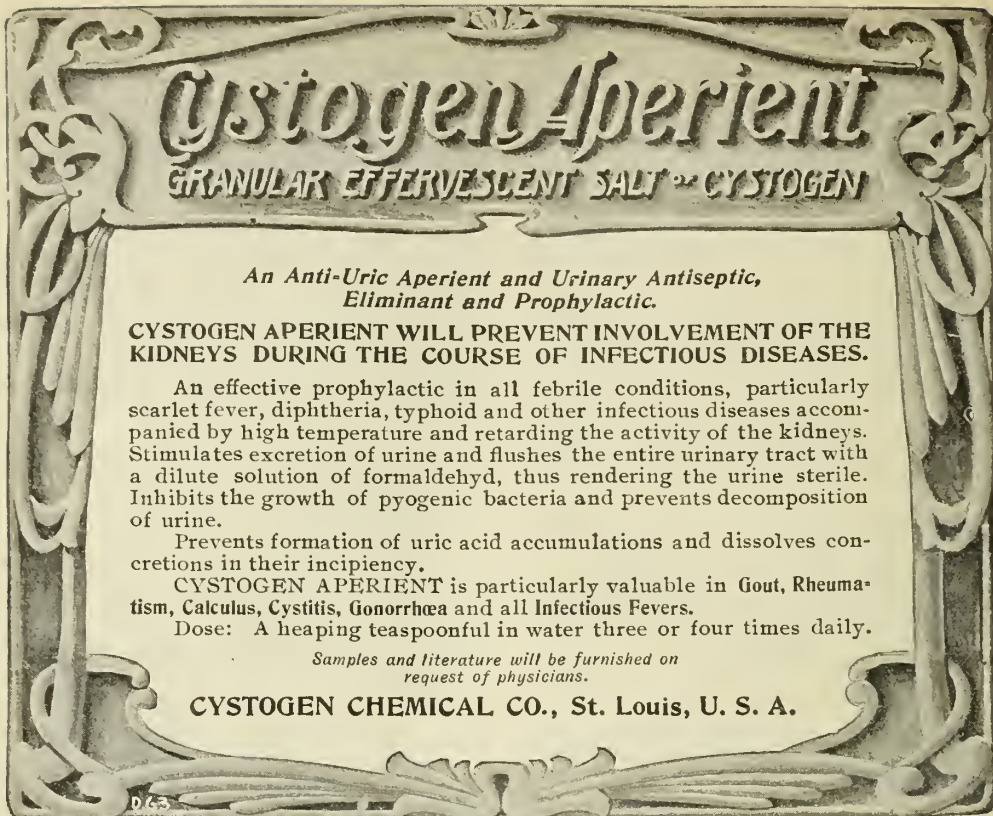
Dr. Horace Wardner, first president of the Illinois State Board of Health, died at La Porte, Ind., where he had lived for many years.

Dr. L. W. Brown who practiced medicine in Sangamon and Morgan counties from 1847 to 1857 and afterwards engaged in farming and banking in Jacksonville, died at the residence of his son-in-law, Dr. Everett J. Brown, Decatur, March 21, aged 82 years.

Brokaw Hospital, Bloomington, received as a legacy from its benefactor, the late A. Brokaw, nearly \$200,000.

Grace Hospital, Chicago, located at the corner of Jackson Boulevard and Sangamon street has recently been opened for the reception of patients. The equipments and appliances are said to be new and modern and the sponsors and managers are all members of the Chicago Medical Society. Miss Abbie Preston is superintendent.

Dr. Milton K. Eisenstaedt of Chicago has announced his engagement to Miss Grace Phillipsborn of 4357 Vincennes ave. that city.



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PUBLISHER'S NOTES.

The Journal is not responsible for any medical or therapeutical views expressed in this department.

THE RECRUITING FIELD OF THE GREAT WHITE PLAGUE.

La Grippe: Its Alkaloidal Treatment.

By W. C. Abbott, M. D.

As usual we have had and shall doubtless still have many and unpleasant experiences with epidemic catarrh before the spring weather puts a stop to its ravages for another six months. None too rapidly the serious character of this disease is being recognized and we no longer speak lightly of a case of true la grippe. None too soon, either, has the fact been realized that the coal-tars are the worst possible remedies to use in this disease, except perhaps for immediate relief in some cases in which the importance of the exigency outweighs the danger and the damage that may be done. It is with the idea of impressing these two points more forcibly that we thus call attention to them and what we believe to be the rational method of treating influenza of the epidemic variety.

It may be accepted as a maxim that where the bacillus of Pfeiffer has gained access, there, subsequently, is a suitable field for the tubercle bacilli. We are aware of the frequency with which pneumonia, pleurisy, neuritis, cardiac neuroses and pericarditis follow la grippe; indeed it is the aftermath which is the most to be dreaded and proves most fatal. But do we realize just how frequently the la grippe patient becomes a phthisical subject? Those who have had the widest clinical experience and have been able to follow their cases most closely know that the proportion is fearfully great.

We cannot divest ourselves of the feeling that the treatment generally followed has more than a little to do with this state of affairs and we have reasons for so thinking. La grippe weakens the entire system; it affects particularly the cells and mucosa of the respiratory tract. The toxins generated invade the bloodstream (greatly to the detriment of the vital fluids) and it is safe to say that after a severe spell of influenza every organ of the body is more or less damaged. Yet the patient in this condition is too often filled with opiates and antipyretics; the symptoms are smothered and systemic apathy encouraged so that the victim, because he feels less acutely ill, may deem himself first "better" than "well," while the truth of the matter is that he has never been so dangerously sick as at the moment of his discharge.

Anemic, with low vitality, toxin-laden and functioning fifty per cent below normal the "cured" grippé patient is apt to fall a victim to any or every disease; at any rate is prone to and usually does relapse repeatedly, and when a patient has relapsing grip, look out. Hence, undoubtedly the large number of fatalities which are attributed to post-grippal "complications." The bacillus of Pfeiffer is not so deadly a germ in itself but it prepares the field for other and more dangerous invaders in mixed infections and it becomes the business of the physician to recognize this fact and counteract the condition.

To start at the beginning, the man or woman who falls a prey to grip is, in nine cases of ten, generally "out of kilter." The first thing to do with such a patient is to render him as nearly normal as may be. He must be cleaned out; elimination must be stimulated and every function must receive attention. Renal and hepatic torpidity is almost invariably present and a blood-count will reveal a marked decrease of the red cells. An examination will disclose various disorders of the urinary chemistry and the exhibition of proper remedies will make it evident that the intestinal tract is teeming with waste toxin-producing matter. To relieve the fever of such a case with antipyrin or to ease the distress with morphine or codeine, and do nothing else, is to commit a serious error. Even the salicylates are out of place save in small doses and as a minor remedy.

The proper treatment of grip is, roughly speaking, as follows: As early as may be, administer a mild mercurial (blue mass one grain or calomel gr. 1-3) every hour until four doses have been taken. The addition to each dose of leptandrin and polophyllin (gr. 1-6 of each) will give better results. One hour after the last dose give a saline draught and repeat this in three hours. You will be astonished at the amount and character of the stools. From the first, exhibit hourly or oftener according to symptoms small doses of aconitine, digitalin and strychnine, adding quinine salicylate, gr. 1-6, to each dose. As soon as the bowels have moved freely the hyperpyrexia will cease to be a feature and the aconitine may be withdrawn. Nuclein in ten-drop doses should be given every four hours and (after the bowels have acted) at least fifteen grains of the sulphocarbolates at the same intervals. Fever being reduced, bowels empty, and in the process of being rendered aseptic the digitalin may be changed for cactin or the pa-

tient receive cactin one, quinine salicylate one and strychnine arsenate one (gr. 1-67) every three hours.

At this stage the specific catarrhal and toxemic conditions should receive attention. Calcium sulphide gr. 1-6 is given hourly, calcidin gr. 1-3 being added to every other dose. This medication with morning and evening saline draughts is continued till all distinctive symptoms have ceased—usually on the third day. If each night one hour before retiring a dram of sweet spirit of niter is exhibited with a glass of cold water, results are better. Nourishment must be of concentrated and fluid form, a little being given often. The patient must remain in a room at 70° F., and should receive a warm sponge bath daily. If an enema is given the first night, so much the better. The mouth and nares should be washed out frequently with a mild alkaline antiseptic solution and the nares swabbed with carbolated vaseline.

The acute stage over, place the patient upon calcidin tablet, hydrastin one granule and quassin two, these things being taken one hour before meals; after eating order two triple arsenates with nuclein, and morning and night ten drops of the latter absorbed from the buccal mucosa. Thrice weekly have a saline taken on rising and the night prior some mild cathartic—the aloin, atropine and cascara compound is excellent. If there are signs of cardiac weakness cactin may be added to the before-meals medication. La grippe patients treated by this method recover promptly and enter the convalescent stage in the very best of condition.

Be sure your grip patients are well, genuinely well before you discharge them.

Chicago, Ill.

The Treatment of Exophthalmic Goitre With the Blood of Thyroidectomized Goats.

In 1894, Lantz treated two exophthalmic-goitre patients with milk from thyroidectomized goats. The results were so favorable that the treatment was applied to four other patients, all of whom as a consequence showed marked improvement and gain in weight.

In 1894 Drs. Ballet and Enriquez took the blood of thyroidectomized dogs that had lived long enough to experience the blood changes which loss of thyroid function is sure to entail,—and injected that blood into patients suffering from exophthalmic goitre. The results were so encouraging that other practitioners soon adopted the method, or a modification of it. The *Deutschemedizinische Wochenschrift*, No. 38, 1899, contained a report of three cases of exophthalmic goitre, in the practice of Dr. Burghart, that improved under the treatment, two of them decidedly. Dr. Burghart did not confine himself to the use of injections, but administered a dried alcoholic extract of the blood.

Later, a Darmstadt chemical house prepared a serum from the blood of thyroidectomized sheep, which, administered to patients who had exophthalmic goitre, produced a good effect; it was given both per os and subcutaneously.

A patient of Schultes (*Munch. Med. Woch.*, No. 20, 1902) in whom symptoms of exophthal-

mic goitre had been in evidence for four years, with pronounced psychic disturbance at times, is said to have been completely cured in two months by the use of gradually increasing doses of the serum (from the blood of thyroidectomized sheep).

In 1901 Mobius (*Munch. Med. Woch.*, Jan. 27, 1903), proposed the preparation of a serum from the blood of sheep, from which the thyroid gland had been removed, to be used in the treatment of exophthalmic goitre. He first injected 1 gramme of serum subcutaneously, but subsequently found that better results could be obtained by giving it internally. In his patients, all of whom had been treated for years with various remedies, the circumference of the neck was reduced, the goitre became smaller, and the patients slept better and were less agitated. It is not presumed that a cure can be established by this mode of treatment, but there seems to be sufficient ground to hope for beneficial results.

Messrs. Parke, Davis & Co. have prepared a dried product of the blood of thyroidectomized animals, called "Thyroidectin," which appears to produce the effects observed by Lantz, Mobius et al. In most of the cases in which it was tested the patients experienced much relief from restlessness, tremor, insomnia, and the usual train of nervous symptoms so generally observed. A gradual reduction of the pulse-rate and in the size of the gland was also noted.

Dr. C. A. Hayes, the attending surgeon, St. Joseph Hospital, Chippewa Falls, Wis., writing of the Ambulatory Pneumatic Splint, says: "It is all that is claimed for it and for fractures of the thigh and hip, believes it is the best devised. For all fractures in which the patient does not do well in bed, this splint is excellent, as they can move about with comfort and with no bad results. I have used it thus far on four cases, two fractures thighs and two compound comminuted fractures of the leg and in all, results were better and the patients did better than by any methods previously employed."

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Infant Feeding.

Dirty milk and stale milk are responsible for the vast majority of the failures in artificial infant feeding; responsible for a great deal of the infant mortality. The temporary use of unwholesome food will often undo all that has been gained by the most careful previous feeding and treatment of the infant. In fact, conditions arising necessitating a change in the dietary of the bottle-fed infant, particularly if the change must be to a food which is not known to be perfectly reliable, must be looked upon as a critical time in the life of the infant. A short railway trip in which the mother is forced to accept the milk obtainable enroute or at a temporary stopping place; the failure of the regular supply to arrive; these must be regarded as periods, even though of briefest duration, which are of the utmost importance.

Such a product as Highland evaporated cream, made from the purest of milk, reaching the factory in the shortest time after leaving the cow and handled with most scrupulous cleanliness, fills a place in the dietary of the bottle-fed infant which must be recognized by the pediatrician of the most dogmatic and positive views. The infant usually accepts this change to dilute evaporated cream without digestive disturbance and is certainly free from the possibility of impurities or disease-producing organisms in the food.—Abstract from a Clinical lecture at the Chicago Clinical School, Chicago, by Marcus P. Hatfield, M. D., Professor of Pediatrics.

An Eligible Combination.

A number of years ago Dr. James J. Sullivan (University Medical College) New York City, applied the remark, "An Eligible Combination" to a then new preparation of well known synergistic remedial agents. It is almost unnecessary to state that the preparation to which he referred is now well and favorably known as Antikamnia & Codeine Tablets, each tablet containing $\frac{1}{4}$ gr. codeine and $4\frac{3}{4}$ grs. antikamnia. A fact which should not be overlooked, is that the codeine used in this tablet is specially prepared and purified is non-constipating, and does not induce habit. These are some of the particularly advantageous features of the Antikamnia Chemical Company's codeine and are well worth bearing in mind.

In the harrassing cough of phthisis, or in the pain of pleuritis, in the painful sensation accompanying bronchitis when the tubes are dry and irritable—as they usually are—the blending of the two drugs composing Antikamnia and Codeine Tablets will not be found wanting in action, but will give results that are gratifying to both the patient and the medical attendant.

This tablet is a sedative to the respiratory centers in both acute and chronic disorders of the lungs. Cough, in the vast majority of cases, is promptly and lastingly decreased, and often entirely suppressed. In diseases of the respiratory organs, pain and cough are the symptoms which especially call for something to relieve and this tablet does the work. In addition it controls the violent spasms accompanying the cough, which are so distressing.

The American Journal of Surgery, New York, is the name of a new Journal which will be issued beginning with the April issue. Joseph MacDonald, Jr., will be the business manager and Walter M. Brickner will be the editor, supported by a staff of able men. It is the successor of the American Journal of Surgery and Gynecology.

Suit Over a Skeleton.

Virginia, March 9.—*Special*.—An articulated skeleton was the "bone of contention" between two Ashland physicians yesterday. Dr. J. A. Glenn sued for possession of the skeleton, which he claimed had been loaned to Dr. L. M. Linker. Dr. Linker claimed it had been given him. Dr. Glenn was awarded a judgment for \$40 by 'Squire T. M. Smith, who heard the case.

The Physicians' Club of Lincoln will incorporate and secure quarters in the Carnegie library building. The trustees are Drs. Leeds, Bradburn and Wilson.

Dr. John W. Turner of Catlin, Vermillion county, filed a petition in bankruptcy in the United States court yesterday. He gives his liabilities as \$703.30 and his assets at \$305.30.

New Incorporations.

The Secretary of State at Springfield has granted licenses to the following corporations:

Equitable Guaranty company, Chicago; capital, \$5,000; provide medical services and burial; incorporators, G. M. Illingworth, C. D. Potts, Daniel P. Roberts.

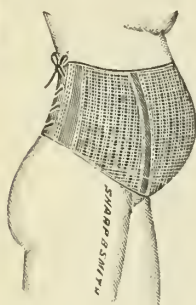
Rhegulus company, La Grange; capital, \$10,000; manufacturing medicine; incorporators, L. Wiley, A. W. Bivans, and S. R. Daniels.

WANTED—To buy a well established practice of not less than 2,500, in a desirable location, with a good house, office, etc. Address X. Y. 3 care Ill. Med. Journal.

WANTED—To purchase a practice in an Illinois city of from two to ten thousand. Will buy property and practice, if satisfactory. Address box 84, Watertown, Wis.

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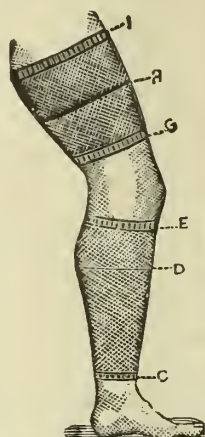
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The Illinois Medical Journal.

The Official Organ of The Illinois State Medical Society.

Vol. VII. No. 5.
25c per copy

Springfield, Ill., May, 1905.

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SURGICAL ANALGESIA FROM SPINAL COCAINIZATION.*

BY ALBERT E. HALSTEAD, CHICAGO.

Since the publication of Bier's paper, in 1899, on spinal cocainization as a substitute for general anesthesia, in operations upon the lower half of the body, a great number of contributions have appeared in the literature, in which every phase of this interesting subject has been discussed *ad infinitum*. As most of this literature is at the disposal of the members of this Society, I propose to pass over the physiology of endomeningeal injection of cocaine and other agents employed for the purpose of producing surgical analgesia and as therapeutic agents and deal briefly with the practical surgical features of the procedure.

No just comparison can be made between general anesthesia and spinal analgesia, because of the necessary limitation of application of the latter to operations upon the lower half of the body. In a certain class of cases when, for good reason, a general anesthetic is contraindicated, spinal analgesia is of great value. The contraindications referred to are those generally agreed upon by both physicians and surgeons. These are very serious lesion of the heart, lungs or kidneys. Of these, I may mention: Chronic bronchitis, emphysema, valvular heart disease and nephritis. Especially when we have a combination of these diseases is a general anesthetic strongly contraindicated. When such conditions exist, and when for other reasons, regional and local anesthesia are impracticable, spinal analgesia is invaluable, and merits more than a passing consideration.

The objections to the use of spinal cocainization that are usually made may be stated as follows:

1. That there are immediate and remote dangers, which are considerable.

2. That it is uncertain in its action, both as to producing surgical analgesia and as to its duration.

3. That attempts at introducing cocaine sometimes fail.

4. That there are unpleasant after-effects.

We must admit that all of these objections are more or less valid. In considering them individually, we find that although deaths may occur as a direct result of spinal cocainization, yet in those reported it would appear that the same termination would probably have occurred in most of them if a general anesthetic had been employed (as will appear from the following cases).

F. Hahn (centralblatt f. d. Grenz. Gebiet Bd. 4) collected 1,708 cases of spinal cocainization for surgical analgesia, of which 8 cases died. In one of these, Tuffier's case, where the lethal issue was attributed to the use of cocaine, the autopsy showed a serious heart and lung lesion, sufficient to cause death. In Dumont's case, death six days after operation; general tuberculosis. In Kocher's case, death some time after resection of a tubercular ankle, with symptoms of meningitis; no autopsy. This could have been tubercular meningitis. Lilienthal's case; death some hours after operation. Tumor of the brain found post mortem.

Foote's case, an aged woman, death following three days after spinal cocainization from general debility. In these five cases it is evident that death could not be attributed to cocaine poisoning.

As to the immediate risks, spinal puncture, under the conditions that usually exist in surgical cases, is in itself harmless; on the other hand, when employed for diagnostic purposes it has been occasionally fol-

*Paper read at a Meeting of the Chicago Medical Society, April 8, 1905.

lowed by serious symptoms, and even a fatal termination. Under these conditions, there generally exists some serious disease of the central nervous system or its coverings, which determines the lethal issue.

The immediate danger in spinal analgesia must be charged to the toxic effect of cocaine. This danger exists, no doubt, and it is not always directly proportionate to the quantity of the drug employed. The uncertainty of action, the frequent idiosyncrasies exhibited toward this drug by different individuals, are generally recognized.

At the present time the actual danger from poisoning cannot be accurately estimated, although spinal cocaineization has been employed in several thousand cases. The unreliability of the drug and the uncertainty of its action in different individuals will always remain an objection to its use, excepting in cases where the dangers from a general anesthetic outweigh the risks incident to the administration of a minimum dose. Morton, of San Francisco, up to November, 1902, had employed it in 673 cases without having more than one fatality. In this case the post-mortem findings were against cocaine poisoning.

The danger of septic meningitis can be eliminated by following the general rules of aseptic technique. In no case, so far reported, has an acute meningitis developed after spinal puncture.

The danger from remote changes in the cord are *nil*, as has been demonstrated beyond question, both by post-mortem and experimental evidence.

The fact that in certain cases no analgesia is produced seems to deter some from employing this procedure. Morton records one failure in 673 cases. My experience, based upon about 70 cases, there were 3 in which no surgical analgesia followed the injection of 15 m. of a 2% solution. In these three cases Truax, Green & Company's preparation of 2% sol. cocaine in sealed tubes was employed. From the total failure of the injection, I am led to believe that the solution was not of the strength indicated, or else contained no cocaine at all. In all of my cases when a fresh solution was made,

analgesia was complete, usually to the costal arch, sometimes higher. Failures from inability to reach the spinal canal are unusual, even in the hands of the inexperienced. Deformities of the lumbar spine may complicate the operation, but as we have a choice of any part between the second lumbar and the lumbo-sacral articulation, no difficulty is ordinarily encountered.

Unpleasant after-effects, such as headache, vomiting, nausea, palpitation, and thirst follow in about 40% of the cases. The most distressing after-effect is the headache, which may last for several days. This, as has been proven by the experiments of Marx and others, is not due to the effect of cocaine, but occurs when a decinormal salt solution or sterile water is injected into the spinal canal. The nausea and vomiting are usually transient, lasting but a few moments. The perspiration and pallor that are quite common are alarming at first, but are of no especial importance. In none of my cases were there any serious respiratory or cardiac symptoms. In patients of extreme age, and those suffering from well marked heart lesions, the pulse generally remained unchanged.

In one case, a woman of 66 (Dr. Hutchinson's patient), with mitral insufficiency, parenchymatous nephritis, ascites and general anasarca, operated upon for a strangulated femoral hernia, no change in the pulse nor any respiratory difficulty were noted.

In a number the pulse became slower, and of a better quality as the operation progressed.

In a case operated upon at St. Luke's Hospital, where there existed a heart lesion, with probably an aortic aneurysm, an operation for double inguinal hernia with an acutely inflamed appendix in the right sac, was done under spinal analgesia, after repeated attempts had been made to administer a general anesthetic. In this case the pulse improved greatly during the operation, and no unpleasant after-effects were noted.

Involuntary evacuation of the bowels during the operation has been mentioned as an objection. In none of my cases has this occurred. In all of my cases the analgesia

has lasted long enough to permit of completion of the operation.

Among the cases that I have operated upon by this method I may mention: Triple hernia; three cases of typhoid perforation of the bowel; intestinal obstruction; three cases of strangulated hernia, with resection of intestine; appendectomy; castration; suprapubic cystotomy; hemorrhoids; perineal resection of rectum; disarticulation of the hip; double thigh amputation and resection of the knee.

Kocher mentions that healing of the wounds made under spinal analgesia does not seem to progress as smoothly as when a general anesthetic has been employed. In none of my cases has any delay in healing been noticeable.

In employing this method in operations upon the upper half of the body, I have had no experience. Morton and Tait, of San Francisco, have rendered analgesic the upper extremities, and also the neck, and parts supplied by the fifth nerve, by injections in the cervical spinal canal, and by forcibly injecting the solution in the lower dorsal and lumbar portions.

TECHNIQUE.

In all my cases the technique employed was that recommended by Tuffier. The steps are:

1. Preliminary hypodermic injection of one-fourth gr. of morphine.

2. Careful preparation of lumbar portion of the back, extending around as far as the middle of the crest of the ilium.

3. Sitting posture, if possible, with the body bent forward in the "scorching position."

4. Recognition of the fourth lumbar spine, which is found by drawing a line from the highest point of one iliac crest to the same point on the opposite side.

5. The needle is introduced just below and to one side of the tip of the fourth lumbar spine, and is directed upwards, forwards and toward the median line for a distance of from two to three and one-half inches. When the membranes are penetrated a distinct diminution of resistance is noticed.

As soon as the needle enters the spinal canal the spinal fluid usually begins to drip from the needle. At first it may be blood-stained, but soon becomes clear. If, after reaching the canal, no fluid escapes, its flow may be hastened by having the patient cough. A stylet may be passed into the needle to remove any obstruction that might be present.

The use of a properly made needle is of importance. The one that I have found most serviceable is Luer's needle and syringe. The needle should be of platinum, and have at the point a short bevel with dull edges. The syringe is made entirely of glass. After introducing the needle, a quantity of spinal fluid equal to the amount of solution that is to be injected is permitted to escape. As the experiments of Tuffier, Carrini and Marx go to show that nausea and vomiting may be induced by the introduction of sterile water or any other fluid, as well as solution of cocaine, and is possibly due to the presence of the added fluid rather than any toxic action of the drug, it would appear rational to reduce the endomeningeal pressure by permitting the escape of some of the spinal fluid. In most of my cases I have employed a fresh two per cent solution of cocaine, prepared at the time of the operation, of which from 15 to 20 m. were injected. I have not followed the method of Morton of placing sterile dry cocaine in the syringe and dissolving it in the spinal fluid withdrawn and then injecting this solution. This undoubtedly is an excellent method.

After the injection, analgesia begins at the toes and gradually extends upwards, usually within two minutes. It is complete generally within ten minutes. At times not until after twenty minutes. In my cases it never extended above the nipple line, and seldom above the level of the tenth costal cartilage at the parasternal line.

The duration of the analgesia is from thirty minutes to three hours or longer. It is never safe to count on its lasting longer than one and one-half hours.

SURGICAL INDICATIONS FOR SPINAL COCAINIZATION.

1. In operations upon the lower half of the body, when, from kidney, lung or heart disease, a general anesthetic is dangerous, and where infiltration or analgesia from neural injections of cocaine are not possible, spinal analgesia can be employed.

2. In strangulated hernia or intestinal obstruction from other causes, and perforations, where considerable time may be required, thus contraindicating the use of local anesthesia, spinal cocainization is an ideal method of securing analgesia, first, because the patient remaining conscious is not so likely to drown in fecal vomit; second, because the shock from the puncture is practically *nil*. In traumatic surgery of the lower extremities, the use of spinal cocainization "blocks" the reflexes and eliminates to a great extent the risk of shock. In amputations about the hip, where shock from the operation is generally very severe, and often fatal, after cocainization of the cord the amputation may be performed without any change in the pulse rate. In this class of operations if, for good reasons, unconsciousness is essential, as it sometimes is, a small amount of ether and chloroform may be administered to secure this end. The spinal cocainization insures the required analgesia.

I believe spinal analgesia is contraindicated in all cases in hysterical women, and young children, and in the insane. It should be used only when its action can be explained to the patient, and thus co-operation secured.

I do not consider any ordinary heart-lesion a contraindication to its use. It goes without saying that any marked idiosyncrasy for cocaine should constitute a positive contraindication against spinal analgesia.

103 State street.

MULTIPLE NEUROFIBROMATA.*

BY R. B. PREBLE, M. D., CHICAGO.

I intended to show one case of this rather common condition, but this afternoon Dr.

Goodkind had in his service at the County Hospital another case, so I brought both of these patients here tonight to show you, and my only excuse for presenting them at all, is to show you to an extraordinary degree one of the commonest of clinical findings.

It is not perhaps generally appreciated that the little pedunculated tumors so commonly found upon the thorax are in reality small fibromatous tumors arising from the fibrous elements of the nerves, and it is only when we find these tumors present in immense numbers, as they are in these cases, that our attention is particularly drawn to them.

Here is a man, 64 years old, who, at the age of 20, began to develop upon his body in places a large number of these tumors. They are now present in immense numbers. How many hundreds there are scattered over his body I do not know. All of you can see the larger tumors. Some of them are almost microscopical in size, others approximating the size of a pigeon's egg. Many of them are sessile, and others are pedunculated, all of them being covered with skin which is more or less perfect, although the skin does not show the same degree of nutrition which the normal skin does. Many of them present upon the surface large comedoes. Most of them are unpigmented, but some of them are. They are present everywhere upon the body. You will see them upon the back of the head, over the thorax, the arms and legs. On the back they are more numerous than elsewhere.

This other man is younger. He is 58 years of age, but gives exactly the same history as the first case. At about the same age he began to notice these tumors appearing upon the body. It is true, they are much less numerous than in the other case, but still they are present in great numbers. There are many hundreds of them. This man has one upon the thigh which is about the size of a hen's egg.

In addition to the presence of these tumors, the men show one other peculiarity, which is usually present, and that is, there

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is more or less pigmentation of the skin. The skin of both of them, particularly of the older man, is quite diffusely pigmented, but does not anywhere show intense pigmentation, except in small areas. Here, for example, I show you a small area of pigmentation of dark brown. The other man's skin is practically the same, but there is not so much pigmentation.

The tumors in both cases show exactly the same characteristics—they are sessile or pedunculated tumors, covered with a thin, rather atrophic skin, and sometimes with comedoes, more often without; sometimes a little pigmented, in other cases a decrease in the amount of pigmentation. The tumor on the trunk of this man shows better than any of the other tumors on the other.

I cannot exaggerate the frequency with which we find these small tumors, which have a distinct pedicle, and look as if at some time they were very much larger than they are at present. The skin is wrinkled, thin and delicate, and in most of them the pigment is less abundant than the pigment in the normal skin.

It would naturally occur to anyone to ask whether or not these tumors cause any disturbance whatsoever. They do so only indirectly. This man, the younger of the two, says he has never had any trouble with any of them. The older man has had some trouble with some of them, for reasons easy to understand. For instance, this tumor upon the forehead is troublesome at times because it interferes with his hat, and these tumors also on his back interfere with his comfort more or less when he lies down. The pressure upon them causes pain, and that is usually the rule when the tumors are numerous. In the other case, as I have said, they cause very little or no disturbance. They do not cause pain, do not interfere with the function of the nerves, and while they do not look like it, they, as a matter of fact, develop from the cutaneous nerves.

There is another set of phenomena quite often present in these cases. There are tumors distinctly in connection with the nerves. Here one would not at first suspect that tumors appear in relation to the nerves.

In other cases there are tumors developing obviously and manifestly in connection with the nerve, so that one can feel them under the skin as a series of nodules and assume an arrangement which gives a sensation comparable to the sensation obtained from varicocele. These tumors in the nerves are quite frequent, and seem to cause no disturbance whatever in general. They cause no interference with function, as a rule.

A third phenomenon which these patients present to a certain degree is the presence of an excessive amount of pigmentation in the skin, sometimes diffusely arranged, sometimes in geometrical figures, oftentimes arranged distinctly along the distribution of some one of the cutaneous nerves.

In addition to those phenomena, there is still a phenomenon which ought to be mentioned, which sometimes happens. That is, the tumors of the skin, instead of being distributed more or less universally over the body, as in both of these cases, are concentrated over one nerve, and we have the picture known to you as fibroma molluscum, which in certain of its forms is a neurofibroma. In addition to the disturbances I have mentioned, one occasionally finds functional disturbances, and if one hunts through the literature as I did, a few years ago, he will be surprised at the infrequency with which any note is made of functional disturbances of the nervous system. The patient complains of paresthesia, or hyperesthesia, occasionally of anesthesia, and I myself had occasion a few years ago to have under observation a patient who showed this condition to a far greater degree than either of these men, namely, the symptom of evident trophic disturbance. The patient to whom I refer was a young woman who had this condition for many years, and who developed upon the posterior surface of one thigh an ulcer which had all the characteristics of a perforating ulcer, so commonly seen in tabes. This girl developed at the end of life gangrene of one foot, for which no other explanation was obvious. Such trophic disturbances as those are exceptional. Another functional symptom is pain, but that is altogether unusual. Even

in these cases where the relation of the tumors to the nerves is obvious, and where upon physical examination the tumors are found directly in the nerve, and widely separating the nerve fibres, still the patients do not complain of pain. This young woman to whom I have referred had one tumor in her neck which was very painful, and which upon the autopsy table showed no variation from all the other tumors which she had, and one can roughly say that there was not a nerve in her body, either cerebral, spinal or sympathetic, which did not show these tumors in large numbers, some attaining considerable size. Sometimes these tumors give rise to disturbances. In some instances the tumor may develop along the course of the nerve and extend into the cranial cavity, or spinal canal, and give rise to the same disturbance which any other neoplasm would do. This has been observed to occur in some cases with great rapidity. Bergrün reported some years ago a case in a boy of eleven, in whom these tumors developed along the cranial nerves, and caused death in the course of a short time by extending to and within the cranial cavity. This woman had tumors in connection with the various spinal nerves, and they extended to and within the spinal canal, and from compression upon the cord gave rise to marked degenerative changes in the spinal cord. While this woman's cranial nerves were also involved, none of the tumors extended within the cranial cavity.

Another thing which must be remembered in the course of these conditions is the possibility of the tumors undergoing sarcomatous degeneration. There have been a moderate number of cases reported in the literature—some 17 or 18—in which the tumors have undergone sarcomatous degeneration. This older man shows one other thing, and that is, if you will notice his hand, you will see a deformity which has been caused by an arthritic process. Several of the smaller joints of the hands have undergone changes which one may describe under the name of arthritis deformans. The same variety of deforming arthritis has taken place in the joints, and this is a phenomenon which has

not been frequently seen in connection with these tumors. A few years ago I searched the literature and found one case in which such changes were described, and I was impressed by it because the young woman to whom I have referred had an extremely severe and generalized arthritis deformans, and it was that clinical estimate which seemed to furnish a basis of information as to the nature of arthritis deformans. We hoped by examining the nervous system we might be able to demonstrate some relation between this disease of the nerves, which long antedated the arthritis deformans, but at the autopsy we were unable to demonstrate any relation whatsoever. It seemed to be an accidental combination. This older man shows exactly similar changes, although they are much less marked in degree, and were it not for the entire absence of any evidence showing the relation between the two processes in the case of this young woman, I should again think that perhaps here we would have an opportunity to demonstrate some relation between the nerve changes and the arthritic changes.

As to what causes the development of these tumors, it would doubtless occur to you that there might be some element of heredity, and, as a matter of fact, there are on record a few cases in which there have been a number of examples of this condition in the same form. Virchow reports one family in which changes occurred in three successive generations, but with one or two exceptions none of the cases has shown heredity. These men do not give any history of any heredity. This condition is said to be the result of some disturbance in the evolution of the embryo. All the tissues which are disturbed in this condition are derived from the epiblast, and it has been suggested that in the evolution of the embryo there is some disturbance of epiblastic tissue. This congenital condition is suggested by the great bulk of cases which show these tumors from birth, but in the three cases I have mentioned none showed any tumors or any other disturbance at birth.

Another suggestion which has been made as to the etiology of this condition is that during the evolution of the fetus it develops multiple neuritis, and these tumors are the result, in a number of instances, of disturbances in the skin from such a neuritis. That theory is purely speculative.

Dr. Preble (closing the discussion): In reply to Dr. Freund's question, I do not think these tumors have any particular bearing upon nutrition. There is no reason whatever for suspecting that any emaciation which may be observed is due to the presence of these tumors.

Dr. Neill has just asked me why I did not say anything about treatment. There is really nothing to be said about it. Of course, if these tumors become mechanically troublesome, as, for example, this large tumor which gets in the way of the man's hat, it is easy to remove it.

THE LARVATED FORMS OF EXOPHTHALMIC GOITRE.*

BY L. HARRISON METTLER, A. M., M. D.
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It is a notable fact that, in regard to the diagnosis of exophthalmic goitre, the clinicians of to-day are divided into two camps, almost as sharply as they were in the days of Flint and Trousseau. Like the former, there are those who find this to be a "rare affection," because they adopt a close and rigid definition of it; whereas, like the latter there are some who regard it as being quite common because in their opinion "the disease may be foreseen and does really exist in a great number of instances without there being exophthalmos, bronchitis or extreme frequency of the pulse."

At once this brings up the question, what is exophthalmic goitre? At what point in its clinical portraiture does it cease to be amenable to a positive diagnosis and become a mere suspicious disease? What constitutes a typical case and what an atypical case? The answer to these queries is fraught with momentous consequences; for by it our statistics in regard to the relative frequency of the disease, its progress and its proper treat-

ment, many have to undergo in some quarters considerable modification.

I have been asked to discuss tonight the atypical or larvated cases—a most difficult task since the whole subject of these so-called *formes frustes* is in a somewhat chaotic condition. The very definition of an atypical form of the disease must necessarily rest upon the definition of the typical form; and the farther we verge away from the latter, the more uncertain our ground becomes. Even the most remote instance of an atypical or rudimentary form of the disease must still be recognizable as a case of exophthalmic goitre; but upon what among its atypical manifestations is it still to be recognized as Graves' disease and not as something else? Answer that question and the whole topic of ill-defined cases becomes immediately simplified.

I have made a rough tabulation of all of the clinical phenomena that have been from time to time associated with variable frequency with the diagnosis of exophthalmic goitre. They number upwards of seventy-five. In order to get at something definite, I have divided these numerous symptoms into three groups. (a) *Typical*, (b) *Doubtful* and (c) *Complicating or merely associating*.

a. *Typical*. At the present time it is pretty generally agreed that the triad, tachycardia, struma and exophthalmos, not only together constitute a typical picture of Graves' disease, but that each of these symptoms, *when sufficiently obvious*, is so characteristic that it alone may serve for a diagnosis. The same may be affirmed of a fourth symptom, tremor, though with a less degree of positiveness. Not one of these symptoms, *when sufficiently developed to be available for diagnostic purposes*, appears exactly in the same way and under the same conditions in any other disease. For instance, the *tachycardia* is less paroxysmal in its exacerbations than it is in any other neurosis. It is the earliest, the most constant and subjectively the most obtrusive symptom. It usually appears abruptly in a neuropath after some severe physical strain or mental shock. The beat is irregular and with an

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exalted degree of force. The impulse is sharp and noticeable over a wider area than normally. Rarely does it ever subside to the normal. The heart flutters and pounds and seems often like a caged animal struggling to set itself free. Sometimes the pulse is regular and small, while the arteries beat vigorously. With all this energy the circulation is not actually increased or hastened. The condition is merely a sort of delirium cordis, representing not strength but rather lack of inhibition. There is often dilatation without hypertrophy and as a result a sound suggestive of mitral regurgitation may be heard at the apex. The statement made by Murray that "no case without acceleration of the pulse can be considered as exophthalmic goitre," may be paralleled with the assertion that every case of tachycardia which cannot be distinctly accounted for upon other organic or functional cause may be regarded not unreasonably as a case of Basedow's disease.

The goitre, its size, shape, mode of development and physical presentations is in sufficiently marked cases unique enough to render it a typical sign.

The eye symptoms, when present, are so distinctive that they are all but pathognomonic.

The tremor is less characteristic than the three preceding symptoms and yet its distribution, the fineness and rapidity of its oscillations, its persistency are, when sufficiently developed, typical enough to make this a cardinal sign. The existence of any two of these four cardinal symptoms always clinches the diagnosis. Any one of them may establish the diagnosis, if it be sufficiently well marked and especially if it be accompanied by certain other minor or doubtful symptoms and complications. All four together make the case a typical one.

b. *Doubtful Symptoms.* By these I mean the symptoms that may or may not belong to the Graves' syndrome. They are not characteristic of the disease and it is an open question always whether they are primary or secondary. They are observed in other affections and hence are of little value in the making

of a differential diagnosis. They are very numerous and involve nearly all of the organs, with no sort of constancy, in Graves' disease. One case may exhibit one group of them; another case may manifest an entirely different group. They are all more or less suggestive of a highly neurasthenic condition and of a greater or less degree of toxæmia. For this reason they have nothing about them sufficiently unique to render them at all pathognomic of Basedow's disease. By way of illustration, permit me to mention a few of them: Anxiety, fear, melancholy, restlessness, insomnia, impairment of memory, paræsthesiæ such as subjective sensations of warmth, boulimia, polydipsia, pruritus, cephalalgia, cramps in the legs and arms, irritable cough, tache cerebrale, dermatographia, hyperidrosis and diminished electrical resistance of the skin, diarrhoea, vomiting, polyuria, pigmentation of the skin, muscular weakness, slight variable temperature, transient oedema, transient glycosuria, transient, intermittent albuminuria, amenorrhoea, general emaciation, etc.

The difficulty in determining whether these are primary or secondary manifestations of the disease is caused by the uncertainty of our knowledge as to whether exophthalmic goitre is *ab origine* an affection of the nervous system or of the thyroid gland. There is no doubt but what some of them are due to hyperthyroidism but whether others of them, as well as the overactivity of the thyroid gland, may not be due to a still more fundamental nervous trouble, we cannot yet affirm or deny. One thing we can assert, however, and that is that a diagnosis of exophthalmic goitre cannot be made upon any one or more of these doubtful symptoms.

c. *Complications.* Many complications and mere associations are. I am satisfied, too often given the dignity of being regarded as symptoms of Grave's disease. Such for example are the manifestations of hysteria, epilepsy, migraine, chorea, paralysis agitans, tetany, Raynaud's gangrene, tabes, general paresis, peripheral neuritis, muscular atrophy, diabètes, myxoedema, leucoderma, rheumatoid arthritis, Addison's disease, cardiac les-

ions, etc. For the purpose of the present paper, nothing further need be said of the complications of exophthalmic goitre except that they are very numerous, are too often erroneously regarded as direct symptoms and in the vast majority of instances are easily differentiated by the other signs that belong to themselves and are in no way characteristic of Grave's disease.

My own personal observation, as well as a rapid survey of the literature of exophthalmic goitre, confirms the general impression that typical cases are exceedingly rare. Their treatment is unsatisfactory in the major cases and uncertain in the minor ones. In the former the prognosis is usually bad though the fatality may be more or less delayed. In the latter, the prognosis is not good though it is not necessarily fatal as to life. As the latter occasionally recover without any treatment, it is always an open question as to the value of any line of treatment that may have been instituted in connection with them. This is why it is within the truth to say that the treatment of the typical cases, major and minor alike, is unsatisfactory. It also explains the saying of Sachs that barren indeed is the year in which there are not forthcoming a new pathogenesis and a new therapy for exophthalmic goitre.

Before a case becomes typical, in the narrow sense of the word, as having all of its cardinal symptoms present, it may last for weeks, months or years, bursting out in severe exacerbations and then remitting, but steadily advancing forward to the full completion of the typical picture. These are really typical but delayed cases. Their diagnosis is less certain than it is in the former cases, but it is nevertheless comparatively easy. Their prognosis can be foretold but only as a highly probable prognosis. These cases will follow the usual course in most instances.

There is a very large class of cases, however, which exhibit one or possibly two cardinal symptoms slightly developed, together with any number of doubtful symptoms. These borderland cases partially include and overlap both the typical and doubtful symptomatology of the disease. They are more nu-

merous than they are generally supposed to be. Their diagnosis is difficult and their prognosis is as a rule favorable, highly favorable, especially under proper management. The twenty-five or more per cent of cases of Grave's disease that get well are to be found chiefly among these larvated examples of the disease. Their prompt recognition is the heaviest responsibility that the practitioner must bear in connection with this entire malady. Unfortunately there is no sign-manual by which these rudimentary, ill-defined cases can be at once detected; but because they exist, because they are numerous, because their symptomatology is confusing and because they usually get well under prompt and proper treatment, no class of cases should be more carefully studied by the physician than these.

These *formes frustes* so much referred to by Trousseau, Charcot, Marie and others, especially of the French school, are not of course *sui generis* in any way and yet there is a certain degree of similarity among them that segregates them, as it were, into a class by themselves. For them to be at all capable of being diagnosed as exophthalmic goitre, they must have at least one of the cardinal symptoms. As a matter of fact, the tachycardia is the cardinal symptom that they practically all show. With the irregular yet typical heart action, there are associated usually a throbbing pulse and a peculiar general nervousness. The whole clinical presentation of these cases may resemble a mere neurasthenia with the headache, vertigo, anxiety, weariness, insomnia, aboulia, hyperidrosis, trembling, etc., that are so familiar in this disease. In true neurasthenia, however, the heart disturbance is more paroxysmal and the pulse does not remain persistently rapid. Again, a tachycardia with a slight cough, hyperidrosis, slight variable temperature, diminished chest expansion and some emaciation may lead to the thought of pulmonary tuberculosis. The absence of the pulmonic signs and the presence of the typical exophthalmic tachycardia will aid materially in the establishment of a differential diagnosis.

In these larvated types of the disease then, the tachycardia may be the only symptom

present when the patient first comes under observation. It has usually appeared rather suddenly, after a severe strain or shock in a neuropathic individual, especially a woman with hysteroid tendencies and a neuropathic ancestry. If any of the minor symptoms, such as mild psychosis, local hyperidrosis, vertigo, vasomotor disturbances, trembling and muscular weakness, reveal themselves with the characteristic tachycardia, the diagnosis is strengthened. Sometimes these cases get well without the appearance of any second cardinal symptom; sometimes, however, they develop a slight enlargement of the thyroid or a slight prominence of the eyeballs and then get well after a time. It is very exceptional for these larvated forms of the disease to ever be entirely devoid of cardiac disturbances. This might well be expected, for in the frank, typical forms, the tachycardia is the most frequent symptom, being present more or less practically in all cases. A larvated case may very rarely show only a slight enlargement of the thyroid as its one cardinal symptom. I have seen a few instances of this. Many of the minor symptoms, chiefly of a neurasthenic character, were present. Still more rarely may a slight exophthalmos be the only cardinal symptom present. If not one of the cardinal symptoms are present, the case cannot be diagnosed as Graves' disease, no matter what the character and number of the minor symptoms may be.

In conclusion, let me emphasize the fact that there are aborted, mild types of exophthalmic goitre; that they are not by any means uncommon; and that they are the most important cases for the physician's consideration from the standpoint of diagnosis, prognosis and treatment. Their diagnosis does not involve so much their mere differentiation from other diseases as it does the direct establishment of the existence of Graves' disease. This positive affirmation of the presence of Graves' disease cannot be made unless one or more of the cardinal symptoms—tachycardia, struma, exophthalmos and tremor—are present. Wanting all of these, the diagnosis is worthless, no matter what other symptoms and complications

may be present. Of the cardinal symptoms, the tachycardia, and of the minor or doubtful symptoms, those of a general neurasthenic complexion constitute the more familiar grouping in these important, larvated types of exophthalmic goitre. Once the diagnosis is established in this type, the prime factors in the treatment of the case are absolute physical and mental rest and heightened nutrition.

100 State street.

PLEURISY.

BY ARTHUR R. EDWARDS, A. M. M. D., CHICAGO.

Pleurisy, the most common of all post-mortem findings (in over 50 per cent) is an inflammation of the pleura, rarely primary, but usually secondary to tuberculosis or other lung disease, general infections, septicemic diseases and various diseases in contiguous tissues or organs. Pleurisy constitutes about 3 per cent of internal maladies. It is susceptible of division into infinite varieties, as acute, subacute or chronic, according to its course; dry or effusive, according to its nature; primary or secondary, as to its cause; diffuse or circumscribed, as to its distribution; sero-fibrinous, hemorrhagic, or suppurative, etc. Any such classification is more or less artificial, whence it seems preferable to first describe all its symptoms and group special types later.

ETIOLOGY.

1. *Tuberculosis.* So called primary, spontaneous or cryptogenetic pleurisy is often tuberculous. (Barrs, Netter, Lemoine, Vaillard, Coston and Dubyille). Landouzy considers that 98% of all pleurisy cases are tuberculous, and that 60% of all phthisis cases pass through the so-called pleuritis a frigore; Netter holds that 70 to 80%, and Aschoff that nearly all "primary" cases are tuberculous. Thirty-two per cent of Osler's cases were tuberculous; 32.6% of Bowditch's and 40% of Hedges' cases. Trauma favors development of tuberculous pleurisy. The causal lesion may be recognized at autopsy in calcified bronchial glands, or small lung

foci. Tuberculous pleurisy is often bilateral. Non-tuberculous pleurisy, by causing adhesions, may favor the development of pulmonary tuberculosis. Its special relations will be discussed later.

2. *Diseases of the Lung Substance*, as pneumonia, abscess, gangrene, infarcts, tuberculosis, tumors, pneumothorax, echinococcus, tertiary syphilis, actinomycosis, etc. According to Koplik, 95% of pleurisies in children follow pneumonia. It is less frequent in diseases involving the bronchi, e. g., in grippe or measles.

3. *Acute Infections*, as rheumatism, sepsis, puerpal fever, endo and pericarditis, variola, scarlatina, measles, diphtheria, etc.; it develops in about 2% of typhoids; it may develop in secondary syphilis without lung lesions (Chantemesse and Widal), probably from toxemia.

4. *Diseases of Adjacent Organs*. (a) Intrathoracic affections, involving the ribs, spine, esophagus, mediastinum, lymph glands, diaphragm, pericardium, etc. (b) Abdominal affections, as of the stomach, spleen, liver, abscess, tumor, cirrhosis (in 16%), etc.; subphrenic abscess, suppurative or tuberculosis peritonitis (in 25%); paraneuritic abscess; abdominal malignancy, etc.; pleural infection may occur by direct local invasion or by the lymph and blood streams; in neglected appendicitis, hepatic and diaphragmatic invasion occurs and later pleural infection.

5. *Tumors*. Echinococcus; endothelioma (Wagner and Fraenkel). According to Neelsen, this is an infectious process, a lymphangitis proliferans (Schwanniger), or, according to Schottelius, it is a lymphangitis carcinomatosa. The pleura swells and develops callosities or adhesions. Carcinoma, sarcoma, echondroma, rarely lipoma. Pleural neoplasms are far more frequently secondary than primary.

6. *Altered Blood States* (dyscrasiae): as gout, nephritis, scurvy, tertiary syphilis, frequently producing bilateral pleurisy and resulting possibly from chemical products or from reduced physiological resistance, favoring various infections.

7. *Terminal Infections*. Various forms

of sepsis often carry off subjects of chronic heart, liver and kidney diseases; bilateral pleurisy is frequent.

8. *Age, Sex, Localization*. (a) Age. Most cases occur between 20 and 50, but no age is exempt, from intrauterine life to extreme old age. (b) Sex. Eichhorst observed pleurisy in 3% of all his male, and in 2% of all his female cases, and found the following (c) localization: Right-sided in 54% left-sided in 42%, and bilateral in 4%.

Cases following nervous disease, cold or exposure, venous thrombosis, trauma, etc., can usually be brought within the above given classification.

BACTERIOLOGY.

The etiological classification above given does not correspond to the bacteriological, e. g., suppurative pleurisy may result from the streptococcus, pneumococcus, tubercle bacillus, or less often from the staphylococcus, typhoid or colon bacilli, etc., and serious pleurisy may be due to the tubercle bacillus or to the pyogenic organisms. The frequently negative cultural results have brought out the hypotheses that chemical products, as retained urinary substances in uremia, or tuberculin, may of themselves produce pleurisy and then die. It must be remembered that cultures are usually made not from the pleura directly, but from the fluid effused from it.

The organisms found are most frequently the pneumococcus, tubercle bacillus and streptococcus; less often the staphylococcus, pneumo-bacillus of Friedlander, typhoid, colon, influenza and diphtheria bacillus, gonococcus, ray fungus, glanders bacillus, micrococcus tetragenus, micrococcus pyogenes tenuis, etc.

1. *Purulent Pleurisy* (empyema) is oftenest due to streptococcus in adults, and to the pneumococcus in children. About 10% of empyemas are tuberculous; empyemas giving no results culturally or by inoculation are usually tuberculous, and may be regarded as a cold abscess of the pleura (Kelsch and Vaillard). The staphylococcus, micrococcus tetragenus and pyogenes tenuis, pneumobacil-

lus, typhoid and colon bacilli are infrequent factors.

2. *Serous Pleurisy* is usually tuberculous, as shown by the constantly increasing percentage of cases in which inoculations are successful. It was formerly stated that tubercle bacilli are not frequently found, and that when found, their presence suggests a direct communication with the tubercular focus. Negative results are due either to an insufficient amount of fluid (less than 10 to 20 c. c.) being inoculated, or to the effusion being due to toxins rather than the micro-organisms themselves.

Eichhorst found tubercle bacilli by direct examination in but 15% of serous pleurisy, while his inoculations were positive in 50%. Jousset recommends that the fluid be allowed to coagulate, and the clots be digested with pepsin, centrifuged and then stained. The staphylococcus is a fairly frequent cause of serous effusions.

3. Most cases of so-called primary pleurisy which are non-tuberculous are due to Fraenkel's *pneumococcus*.

4. Meta, and para-pneumonic pleurisy is most frequently due to the pneumococcus, but also to the streptococcus and staphylococcus, even when no pus is formed, although mixed infections have a tendency to suppuration.

Physical Findings are absolutely essential for diagnosis, while all symptoms are ambiguous and may be wholly absent. In the main, all types have much the same signs: serous pleurisy nearly always showing friction, and fibrinous pleurisy being almost always accompanied by some exudation.

1. *Inspection.* (a) *Inspiratory retraction* of the intercostal spaces may result from imperfect ingress of air, pain, or adhesions. Epigastric retraction during inspiration is due to contraction of the diaphragm. (b) *Decubitus.* The patient often lies at first, during the dry stage, on the sound side, to avoid pain from pressure of the inflamed surfaces; and later, during the exudative stage, he lies on the diseased side, in order to allow for mechanical reasons a freer expansion of the sound lung, especially in large exudates. Traube believed that continued

lying on the diseased side aggravated pain by congesting the pleural and sub-pleural veins. The patient may sit up for breath or assume the diagonal decubitus. (Andral). (c) *Ectasia* (distention) is said to occur especially in children, and is determined by mensuration and inspection. The interspaces are obliterated, the costal arch is immobile during respiration, the skin glistening, the spine curved toward the diseased side, the shoulder higher, and the nipple and scapula are further from the median line. The right chest is normally one to two centimeters larger than the left; again, the sound side usually measures three centimeters more than its normal dimensions, on account of compensatory emphysema (Gerhardt), and Verhaghen found that in children the sound side is usually more voluminous than the diseased side. (d) *Respiratory movement* on the affected side is decreased or absent in both dry and exudative pleurisy. Respiration is reflexly decreased on the diseased side, and is at times somewhat later than on the sound side. The frequency of respiration is increased from lung compression, pain, heart luxation, the low diaphragm, fever or edema, and paresis of the intercostal muscles. Pain alone may reflexly decrease the respiratory expansion and variation on the same side may occur, there being more movement above and less below. (e) The X-rays often, but not always, show a dark shadow. (f) Inspection also reveals cyanosis, edema of the chest wall in suppurative pleurisy, and occasionally in other forms, dislocation of the apex beat, substernal pulsation, venous pulsation. (g) Absence of *Litten's phenomenon*; and (h) rarely, pulsation of the effusion.

2. *Palpation* amplifies the findings of inspection. (a) An up and down sensation, less often a horizontal, friction rub is felt, increased by pressure, which also increases the pain and tenderness and is the more readily distinguished the coarser the rub and the more capable the chest wall of vibration. It is usually absent in obese individuals. The friction appears before the effusion, is often present during effusion, and after it is absorbed. The rub is due to roughening of the

pleura, which loses its glistening appearance, and looks like glass upon which one has breathed (Klebs), and the two raw pleural surfaces scrape on each other. It may be very transient, lasting a few hours or days, even disappearing when the patient takes a deeper breath, or it may last months or even years. (b) Pressure on a tender interspace during deep inspiration may cause a *sudden contraction* of the upper part of the *rectus muscle*, on the side of lesion (Schmidt). (c) *Vocal fremitus*, normally greater on the right than on the left side, varies according to the level at which it is tested. (a) Above the effusion it is normal. (2) Near the spine it is increased over the compressed and relaxed lung. (3) Below, it is *weak or absent*, from exudation of thick fibrin or fluid, though less change is observed in dry pleurisy.

Irregular findings are due to the presence of adhesions, bringing the lung closer to the chest wall in some places than in others. The condition of the lung and the bronchial secretion are important, whence before the test is made, the patient should be made to cough and take a number of deep breaths. The results are irregular in loculated effusions. (d) By tapping with the finger tips, we palpate the *increased resistance*. (e) Edema of the chest wall on the diseased side may be inflammatory, occurring in serous as well as purulent pleurisy, or mechanical from pressure on the azygos or hemiazygos veins, when it is usually more intense than the inflammatory form. (f) *Fluctuation* is rarely palpable, and then only in great effusions: pressing the fingers upward toward the diaphragm with the other fingers in the interspaces in exceptional cases elicits fluctuation. (g) Palpation also determines the *dislocated apex beat*, the *dislocated liver*, *spleen*, bulging diaphragm, and sometimes a furrow, noted by Stokes, between the diaphragm and liver.

3. *Percussion* is negative in the dry pleurisy, save in those forms in which there is a very thick fibrinous exudate, which may cause dullness and weak breathing.

In effusion (a) *dullness* is found between the fifth and eighth ribs, in the left axilla,

along the sternum and over the liver on the right side, and posteriorly. Dullness may also result from old adhesions, atelectasis of the lung, great fibrin formation in the pleura, obesity, etc. As in pneumothorax, distention of the lungs and calcification of the ribs may somewhat obscure the dullness of an effusion.

In doubtful cases we percuss the apparently sound side first. According to Ferber's experiments on the cadaver, 400 c. c. of fluid are necessary in the adult for recognition, and 120 c. c. in children, yet post-mortem experiments do not meet the conditions obtaining during life. The effusion must be 2 c. c. thick to produce dullness. Sometimes, however, 200 c. c. producing dullness, one finger in width, and in children 120 c. c., producing dullness one finger wide, may be recognized. In some doubtful cases small amounts may be detected, as proven by puncture especially in thin thoracic walls, as in children and women. Light percussion is necessary in small effusions, lest other normal parts be brought into vibration. Before percussion the patient should breathe several times deeply, to eliminate partial collapse of the lung, and impaired ingress of air from bronchial secretion.

Percussion is absolutely essential to diagnosis. Not merely the audible dullness should be regarded, but also the *palpable sense of resistance*, which may be noted on light percussion and with the ears closed. The dullness is marked, amounting to distinct flatness.

In larger effusions, the *flatness*, at first posteriorly located, is noticed to increase along the spine, and also laterally. In massive exudates flatness may reach from the lower limit of the pleura to above the clavicles.

The dullness is usually highest posteriorly, but adhesions may cause an opposite condition. The line of dullness is not even, but describes a parabolic curve, due, according to Gerhardt, to the uneven thickness of the chest wall, or, according to Eichhorst, to irregular adhesions. If the fluid has effused while the patient was in bed, the highest level of dullness is in the axillary line; if it developed while he was up and around, the

upper level is horizontal. Dulness is found one to two centimeters higher than the upper level of the fluid, due to plastic exudate.

(b) Right-sided effusions merge with the liver dulness, but the lower limit of left-sided effusions can usually be determined, because they *invade Traube's semilunar space*. This "half moon" space lies between the fifth and sixth costal cartilages above, and tenth rib below, representing the supplementary pleural space, and designated as the half-moon space because of the curve at its upper portion, produced by the apex of the heart; its tympanitic note is decreased or replaced by flatness in left-sided effusions without adhesions. Dulness here may not be confused with the spleen, since there is no pulmonary excursion in pleurisy, and the dulness lies more toward the heart than toward the splenic region. Scybala, food in the stomach or bowels, etc., may also impinge on Traube's space.

(c) *Respiratory excursion is absent* in effusions of any size.

(d) *The change of the upper line of dulness with change of position* has been emphasized by Gerhardt, Rosenbach, Da Costa, and most writers. It is usually stated that change of position causes variation in the level of the effusion, and that the level changes in 55%, changes very little in 30%, and none in 15% of cases. According to personal experience, it is difficult to detect on account of the adhesions usual at the level of the fluid. The line of dulness does not change rapidly on mere change of posture; the patient must lie some hours in another posture before any alteration of the upper level appears.

(c) *A vertical strip of the tympany* along the spine in large exudates, often measuring three centimeters wide, may be detected; it is due to compression of the lung. Tympany in the lower part of the left chest may result from gaseous distention of the stomach and intestines.

(f) Tympany is observed over an upper lobe from compression or relaxation of the lung. First observed by Avenbrugger and Skoda, it is usually called the *Skodaic note*. Rosenbach explains it by tension of the intercostal muscles during inspiration.

(g) "*Cracked-pot*" resonance occasionally appears on short forcible percussion over the upper lobe, and results from sudden expulsion of air through the rima glottidis.

(h) *William's tracheal note* is observed on the left more than on the right side, and chiefly when the entire side is dull. It is best obtained in the first and second interspaces, and is due to transmission of percussion vibration from the fluid to the trachea, giving a tympanitic note. A change of pitch with opening and closing of the mouth, like that observed by Wintrich, in lung cavities, is occasionally present.

(i) *Dislocation of other organs*. There is no direct parallelism between the amount of exudate and the amount of luxation. Luxation, of course, is absent if the organs are adherent. The heart is usually dislocated *in toto*, and but seldom suffers torsion or change of the direction of its axis. The right ventricle may be seen to pulsate to the right of the sternum, even in the right nipple line in left-sided effusions. In right-sided effusions the apex is pushed to the left and downward, since the diaphragm is lower. The liver is less easily dislocated than the heart, but in right-sided effusions is pushed down, and the left lobe tipped somewhat upward, though both lobes may be dislocated downward in very extensive pleurisy, as noted by Traube and Fraentzel. In the left-sided effusions the spleen is dislocated downward and forward; undergoes some torsion and may stand perpendicular to the costal arch.

4. *Auscultation* is most important in dry or effusive pleurisy.

(a) *The friction rub* (v. Palpation) may be hard or soft, is superficial (i. e., close to the ear), resembling the sound made by scratching the finger on the ear, or resembling the crunching of snow under the shoe; it often appears in the first twelve hours. It is most frequent during inspiration, but very often is detected in both inspiration and expiration, seldom during expiration alone. Inflammation of one leaf of the pleura is sufficient for its production. It may disappear after several long breaths, which smooth the pleural roughening. The

interrupted rub is due to pleural irregularities. It may be increased by pressure, and is subject to no law as to its duration. Wintrich heard a pleural rub over four years, and Gerhardt one lasting six years. It is heard most frequently over the antero-lateral portion of the chest, and is detected better with the stethoscope than with the naked ear, but may sometimes be heard at a distance of several feet. If it is apical, tuberculosis is specially suspected. It may be also present in miliary tuberculosis (v. Jürgensen), and in tumors of the lung or pleura, without actual pleurisy. It commonly becomes less clear when exudation develops, and its reappearance may indicate beginning of absorption, or extension of the process at the level of the fluid.

(b) *The breath sounds are modified* not only by the effusion, but by the condition of the lung, strength of the breathing, and conditions of conduction existing in the pleura and thoracic walls. In general, especially in men and children, the *respiratory sounds are weakened*, even in fibrinous pleurisy, from repressed breathing and perhaps from pain alone; *cog-wheel breathing* is common.

In moderate effusions three zones are observed: (1) Absent breathing in the lower parts from compression of the lung by the exudate, which also lessens the conduction of the vesicular breath sounds. (2) Bronchial breathing in the middle zone, from moderate collapse of the alveoli of the lung, with fair conduction through the bronchi. (3) An upper zone of sharp or exaggerated vesicular breathing. In larger effusions the lower zone extends higher and bronchial breathing may be heard near the clavicle, or between the scapula and spine. In the largest effusions, the breathing is indistinct everywhere, with areas of metallic bronchial breathing, when the lung is wholly collapsed. Amphoric breathing exceptionally results.

(c) *The voice sounds are absent* over the fluid, or over very thick plastic exudate. Here and there may persist where islets of the lung are adherent to the chest wall.

(d) *Bronchial breathing* and increased

fremitus may be present, as in pneumonia, especially in children with empyema, under the following conditions: The chest wall is not the seat of edema, the bronchi are patent, there is no great fibrin deposit on the pleura, and the lungs are retracted, but not compressed. The bronchial breathing may be as intense as in pneumonia or tumor.

(e) *Bronchophony* depends upon the same conditions as bronchial breathing, viz: Patent bronchi, moderate retraction of the lung, and conditions favoring good sound conduction..

(f) *Aegophony*, an exaggerated bronchophony, was described by Laennec, and is found chiefly in middle-sized effusions, usually at the level of the fluid. It occurs less often in caverns and infiltrations. In larg effusions it is rare, the compression being too great. Its cause is the voice sounds passing through the compressed smaller bronchi to the chest wall, and may be present when the exudate is increasing or decreasing at a given point.

(g) *Baccelli's symptom* is the "whispering voice," and is heard on the diseased side. Baccelli thought that it was observed more in serous effusions, but it also occurs in other pleurisies, in chronic induration of the lungs, pneumonia, hydrothorax and cavities.

(h) *Heart*. A wide propagation of the heart tones speaks more for consolidation than for effusion, but if we exclude consolidation, hearing the heart tones more widely than normal suggests dislocation of the heart by an effusion. Murmurs from bending of the large vessels by dislocation of the heart may be heard as well as accidental murmurs, resulting from a weakened heart, toxemia, or high temperature.

5. *Diagnostic Puncture* settles the following questions: (a) Whether pleurisy exists; or (b) pneumonia; or (c) hypostasis, tumor, atelectasis, etc.; (d) it determines the character of the fluid; (e) the prognosis; (f) puncture with aspiration is an important therapeutic measure. *In all doubtful cases puncture is indicated.*

Negative results from puncture may re-

sult from a thick fibrin deposit, and thick exudate, failure to reach an encapsulated effusion as an interlobar pleurisy, and the membrane may be pushed in before the needle, so that the fluid is not reached. In negative or dry taps, after withdrawal of the needle, it should be examined to see that no plug of fibrin or cells has collected in the needle. If a plug is obtained, it should be emptied upon a glass slide and examined under the microscope. Care should be taken that no carbolic acid or alcohol remain in the syringe or the needle which may cause coagulation, thus explaining some dry punctures. A puncture should be made with a large needle. When the needle is introduced, we may feel resistance from a calloused pleurisy or an indurated lung. Often after introduction of the needle the point may be felt to be freely movable as in a cavity. Sometimes the results of puncture differ according to the level of the puncture. Rarely serum may be obtained from a high puncture, and a cellular deposit from a lower puncture, the cells settling to the bottom. Again, puncture in different localities may show serum in one; hemorrhage, pus, etc., in another, sac. Bacteriological examinations made with 10-20 c.c. of the serum, give frequent results and over 50% of the serous cases are proven tuberculous on inoculation.

The special chemical, bacteriological, cellular and other characteristics will be discussed under individual forms.

SYMPTOMS.

Symptoms may be absent (*latent pleurisy*); if present, they are not distinctive, and there is no fixed relation between the symptoms and physical findings.

(a) The temperature is variable. Its rise is usually gradual, and seldom with a rigor, as in pneumonia. There may be no temperature for weeks even in purulent exudates, especially in marantic, diabetic and anemic subjects, and in terminal infections. When present, it may be continuous, or more frequently subcontinuous or remittent. Temperature is no positive index as to the character of the fluid. Exacerbations of temperature are important prognostically,

especially when the appetite is poor and no change occurs in the physical findings. No recovery is to be expected till the temperature remains normal for some time. A sudden rise and fall, like a crisis, is exceptionally observed just before resorption.

(b) The *pulse* is increased; it is sometimes small, and occasionally of the paradoxical type.

(c) *Dyspnea* is seldom a part of pleurisy, for effusions may attain enormous proportions without respiratory difficulty, particularly when gradual in development. Dyspnea is usually referable to coincident bronchitis, pneumonia, lung congestion (Potain), pericarditis, arterio-sclerosis, nephritis, or to bilateral pleuritis.

(d) *Pain* is usually an initial symptom. It is in no way proportional to the physical findings. It may be absent, when auscultation shows a marked rub. Its character is usually dull, tearing, stabbing, and sometimes very severe, but it may be crampy or colicky. The pain is usually pleural (Cruveilhier,) but may be neuralgic or due to neuritic or muscle changes. The pain is observed in the side, well down over the ribs, over the liver, epigastrium, or low in the back, and sometimes may radiate to the sound side (Laennec and Gerhardt), into the arm or spine, or into the abdomen, especially in children, simulating appendicitis, etc.

(e) *Coughing*, an early and frequent symptom, results from accidental bronchitis or oftener from pleural irritation. It may appear after change of posture or tapping. It is usually unproductive.

(f) *Other Symptoms.* Anorexia, vomiting, headache, difficult swallowing (Ferber), due to involvement of the foramen esophageum, marked sweating, next in importance after sepsis and rheumatism. The urine is scanty, but increases during resorption, when peptonuria and transient albuminuria are often found (Courmont and Nicola).

The skin may be pale and cachectic when pus forms; red from high temperature; cyanotic from poor oxygenation, or suddenly pallid from hemorrhage into the pleura.

when there is a sudden increase of fluid. Emaciation is common in chronic pleurisy of the tuberculous or purulent type.

SPECIAL FORMS.

A. CHARACTER OF THE INFLAMMATION.

In 790 cases Eichhorst found serous pleurisy in 81%, fibrinous in 12%, purulent in 5%, ichorous and hemorrhagic each in 1%.

1. *Serous pleurisy* is the prototype of pleuritic disease. As stated, most cases are tuberculous. The fluid is lemon-colored. Its specific gravity ranges between about 1015 and 1023, limits which Méhu considers characteristic of inflammation. Albumin is present, 3 to 7%; sugar is frequently present; glycogen, urea, uric acid, bile, etc., are inconstant constituents. The fluid clots after puncture. All varieties of pleurisy, serous and otherwise, contain white blood cells, red blood cells, and endothelial cells; the cells may show some fatty degeneration. Much emphasis has been placed on the character of the leucocytes found in tuberculous pleuritis; Widal and Ravault especially (1900) insist that lymphocytes are characteristic of primitive pleural tuberculosis, and afford early diagnostic data (long before inoculation results are available); the fluid must be examined before it coagulates; in other pleurisies, the polymorphonuclears prevail. The same writers believe that lymphocytosis is not present in the pleurisy secondary to well-developed phthisis. The tuberculous nature of pleurisy is established by inoculation tests, positive in 50% to 66%; apical or other serous membrane involvement, and by the finding of tuberculosis in cases of sudden death in the course of pleurisy (Landouzy, Dujardin - Beaumetz, Dieulafoy, Kelsch, Binet, etc.). It is well to suspect, at least, the tuberculous nature of all so-called rheumatic pleurisies (pleuritis a frigore), although cold may sometimes produce pleurisy in both man and beast. The sputum and lungs should be carefully watched in such cases for some time (see prognosis).

2. *Fibrinous pleurisy* usually shows

some fluid, serous or purulent, if systematic punctures are made.

3. *Purulent or Suppurative Pleurisy* (empyema) usually begins as a serous exudate, which soon becomes opaque and purulent. The tuberculous form has been discussed. The most frequent types are (a) the *streptococcic*, observed chiefly in adults, the fluid being thin and separating on standing into an upper serous layer, and a lower denser layer, fibrin formation being slight; and (b) the *pneumococcic*, more common in children, the fluid being more homogenous, and viscid, like the "laudable" pus of the early writers, the fibrin and membrane formation being abundant, the odor peculiar, oftener accompanied by endocarditis, pericarditis, and meningitis, more often febrile, and more susceptible of spontaneous recovery than the streptococcic form. The fact that the pneumococcus has far less pyogenic properties in the lung than in the pleura has excited frequent comment. Microscopically, we find various bacteria (v. bacteriology), polymorphonuclear white cells, often fatty, and sometimes cholesterol and the Charcot-Leyden crystals. The distension may be enormous, Krause reporting twenty-two pounds of pus in one case.

Empyema pulsans (Walshe) is not frequent. Ninety-five per cent of all pulsating effusions are purulent, while but 5% are serothorax; 93% are left-sided. A pulsating tumor the size of the first may be noticed, usually, but not always, decreasing during inspiration, or the effusion may simply pulsate behind the ribs. In either case the pulsation may be expansile. The pulsating tumor is usually between the second and fourth ribs anteriorly, but may be seen lower, on the side, or even below in the back. Pulsation ceases after aspiration. Pulsation is not a sign of necrosis of the pleura, as some would have it, and the explanations advanced are unsatisfactory, as coincident pneumothorax (Féréal), atelectasis of the lung (Comby), adhesions and paresis of the intercostal muscles (Traube, Keppler). The most apparent conditions are considerable cardiac energy, massive exudation and

paretic intercostal muscles. Empyema pulsans may be confused with *aneurysm*, which is far slower in its evolution, far oftener located above and to the right, and has its own signs, as murmur, thrill, etc.; with pulsating abscess; pulsating tumor of the lung, and pulsating pneumonia. Aneurysm may coexist with pleurisy. Expansile palpation of the chest wall has been twice observed without exudation, aneurysm or any organic change.

Empyema may rupture externally, *Empyema necessitatis*. Rupture is usually along the sternum or lower ribs. Gravitating abscesses may result as pulsating tumors in the groin or loin, which may be confused with aneurysm or spinal caries. *Rupture into the lung* may cause suffocation during sleep. Fistulae, hectic and amyloidosis, are frequent sequelae.

Hippocrates was acquainted with the "mouth full" expectoration, and also with the fact, later described by Traube, that pus may penetrate the lung like a sponge without perforation or pneumothorax. Unverricht thinks, however, that perforation into the lung without pneumothorax is best explained by a small opening which allows the escape of fluid into the lung, but not the escape of air into the pleura, because of the higher tension in the exudate.

4. *Putrid pleurisy* is usually associated with gangrene of the lung, pneumothorax, esophageal carcinoma, appendicular abscess, and kindred lesions. The fluid is extremely fetid; fatty, leucin, tyrosin, cholestearin, and sometimes hematoidin crystals are found; the colon bacillus and other gasogenic bacteria are frequently present.

5. *Hemorrhagic pleurisy* is usually serofibrinous, tinged with blood: five to six thousand red cells per m.m.³ are necessary to produce a reddish tinge. It is seldom suspected before puncture. (a) Most cases are *tuberculous*. Dieulafoy speaks of these cases as having "hemoptysis into their pleura." After puncture the fluid frequently returns, but recovery is possible. (b) Some are *cancerous*. Moutard-Martin has found hemorrhagic pleurisy in but 12% of pulmonary-pleural cancer; pain, dyspnea,

luxation, and rapid pulse are frequent symptoms; the fluid is dark red, contains little fibrin, and usually reappears rapidly; a case of Desnos' being punctured thirty times in six months. (c) Some cases occur in liver cirrhosis, of which Laennec published the first case in 1826; in nephritis; hemorrhagic fevers, or exanthemata, etc.; profuse hemorrhage into the pleura was called pleural hematoma by Wintrich, and pachypleuritis hemorrhagica by Chouppe, from its resemblance to hemorrhagic pachymeningitis.

6. *Chyliform pleurisy* occurs chiefly in pleural neoplasms or tuberculosis; the fluid is milky, contains fatty droplets, fatty cells, and albuminous detritus in suspension; cholestearin, lecithin, etc., may be found. (Sometimes the exudate is colloid.) In multilocular exudation, where one pocket contains pus, another serum, still another hemorrhagic fluid, etc., Galliard speaks of polymorphous pleurisy.

B. LOCATION OF THE EXUDATE.

1. *Pleuritis Diaphragmatica* produces much subjective disturbance. Radiating pain is often experienced, which may resemble angina pectoris (Andral). Pain and tenderness in the epigastrium and between the tenth rib and the xiphoid is pathognomonic, according to Guëneau de Mussey. Schmidt's respiratory abdominal reflex, an inspiratory spasm of the upper part of the rectus muscle, rather points to phrenic involvement.

Dysphagia from inflammation of the foramen esophageum may result. If left-sided, vomiting and singultus may be noted, and if right-sided, icterus is not uncommon. Cough may occur spontaneously or on pressure. Pressure in the lower interspaces near the spine elicits tenderness; tenderness over the cervical portion of the phrenic nerve may be noted, together with reflected pain along the mamillary branches of the cervical nerves to the shoulder. Dyspnea is usually great, temperature usually lacking, the lower chest moves but little, the respiratory murmur is very weak and friction may be heard over the liver or in the half-moon space of Traube. If no exudate results, the

diaphragm may remain high. Fluid may accumulate between the diaphragm and lung without reaching the chest wall, and therefore without causing dullness. Fibrinous is more common than serous effusion.

2. *Interlobar pleurisy* is difficult to diagnose, as there is less surface dullness. The amount of exudate may be a few up to 200 or 400 gm. It occurs most frequently after acute pneumonia, or in tuberculosis. Previous pleurisy may favor its development by marked adhesions obliterating the general pleural space. As Laennec noted, it is almost always suppurative. Its early diagnosis is uncertain; fever, rales, cough and dyspnea suggesting some lung lesion; later, a zonal dullness is found conforming to an interlobar fissure, bounded above and below by a normal or somewhat over-resonant note. The heart may be pushed to the right in left-sided localization, but the liver is not luxated by right-sided localization. The symptoms may be like those of lung abscess, from which during life differentiation is sometimes impossible. It may be shown by the X-rays. Large effusions may break internally, pus being suddenly detected in the sputum. Hemoptysis may occur. Puncture is attended with more danger as the lung may be infected by the needle. Spontaneous recovery is infrequent.

3. *Mediastinal pleurisy* was described by Laennec and Andral. It is most often tuberculous or pneumococcic, and oftener purulent than serous. The symptoms of lung compression are less distinctive than those of compression of mediastinal tissues. There may be wheezing, dyspnea, dysphagia, dysphonia, fever, intrathoracic oppression or pain, a pertussis-like cough, enlarged thoracic veins from azygos compression, deviation of the larynx or trachea, dullness between the scapula and spine, and a suggestive X-ray picture. The sudden onset and febrile course differentiates from aneurysm, tumor, adenopathies, etc. The outlook is serious without operation.

4. *Peri- (para) pleuritis* (Wunderlich, Bartels, Billroth) is inflammation outside the parietal pleura, and is usually purulent.

Some cases follow glanders, but most are due to actinomyces. Fistulae and the evacuation of the characteristic sulphur granules are common. The symptoms are more local and irregular than in pleurisy; fluctuation more frequent. Heart dislocation and lung compression are rare; the respiratory excursion is free, and lung resonance may be elicited beneath the dullness. Metastatic inflammation, perforation and burrowing are common.

c. *In children* pleurisy is attended by more general symptoms; higher temperature, higher pulse and respiration rate. Bronchial breathing is more frequent, there is less dullness, less luxation, less friction, and it often follows pneumonia, where in the majority of cases the empyema is more benign.

According to Lemoine, metapneumonic pleurisy is distinguished from parapneumonic in being slower in its course.

COURSE.

The *course* of uncomplicated pleurisy averages three to six weeks, acute cases lasting two, subacute three to eight, and chronic cases, eight or more, weeks. No general rule can be laid down, and the onset, whether mild or stormy, is no index of the issue. No cycle is seen in any form of pleurisy.

Pleuritis acutissima, with high fever, typhoid symptoms and early death is fortunately rare. Friction below and in front rarely attends great effusions, and therefore, after exclusion of tuberculosis, carcinoma or pyemia, the prognosis is relatively better. In the average case, dry pleurisy precedes and succeeds exudation. Recurrence and exacerbations are poor prognostics. Death more frequently follows from exhaustion and gradual cardiac failure. Partial absorption with persistence of temperature or dyspnea speaks for tuberculous pleurisy. Rheumatic pleurisies heal more readily than tuberculous. I have seen recovery even in secondary carcinomatous pleurisies.

ISSUE.

A. *Resorption* may occur and even purulent (pneumococcic) pleurisy may exceptionally resorb in part without operation, or rupture, leaving inspissated caseous accumulations. Serous pleurisies may resorb after

three to six months, followed by friction well down over the chest, which lasts some time.

B. *Adhesions.* The thickness of pleural adhesions is more important than their extent. Universal obliteration of the pleura by thin adhesions often causes no trouble. Retraction of the lung, compensatory emphysema, pain, thoracic oppression, obliteration of the complementary pleural space, dulness, decreased vocal fremitus and breathing, failure of Litten's phenomenon, and decreased respiratory excursion, and stagnation of bronchial secretion may be observed, when the adhesions are thick. If there is exudate around the heart, the apex beat may increase during inspiration, as also occurs in bronchial catarrh (Eichhorst. Failure of the right heart with stasis may occur, yet most extensive adhesions sometimes exist without any cardiac changes. Peritonitis, mediastinitis, induration and obliterative pericarditis may complicate the case. In some instances the pleura calcifies or ossifies, leaving a deposit of 3 centimetres or more.

C. *Sudden death* from syncope after exertion, coughing or pressing efforts, as urination and defecation, may occur. Sudden death occurs from paralysis of the left ventricle, cardiac thrombosis, pulmonary edema, nicking of the aorta, compression of the cava at the diaphragm (?), and rarely pulmonary embolism from venous thrombosis. Rarer still is rupture of fluid into the lung or bronchi, drowning the patient during sleep; death from hemorrhage into the effusion, from pneumo-thorax, brain embolism, etc.

D. *Retractio thoracis* is signaled by increased resistance, decreased fremitus, decreased circumference of the side affected, and often by bronchiectasis. The percussion note is dull and the breathing usually decreased, but sometimes bronchial. The factors involved are atmospheric pressure, contraction of the pleural scars and extension of the inflammation into the lung, pleurogenous (interstitial) pneumonia, also known as pleuritis deformans, which sometimes divides the lung up into lobes or islets.

E. *Changes in Other Organs.* In retraction, other organs may be dislocated. The

ver may be higher when the right side is involved, and in left-sided retraction the lung may shrink away from the heart, the spleen and the heart may lie higher and Traube's space may be increased. Organs, too, displaced by exudate may rarely remain luxated after the exudate absorbs. Pleural callosities may produce recurrent laryngeal paralysis, which may also follow the pressure of a fluid exudate or enlarged glands. Other complications are acute and chronic infiltration in the lung; inflammation and degenerative changes in the musculature of the chest; extension to other serous surfaces; septico-pyemia; stasis in the liver, stomach, extremities, etc.; hemorrhages into the skin; chronic nephritis; amyloid change; pulmonary, glandular, genito-urinary or miliary tuberculosis.

Scagliari, quoted by Eichhorst, reports 47 cases of paralysis of the arm, probably due to brachial neuritis.

PROGNOSIS.

1. The immediate mortality is about 5%. A forecast cannot be made in a week or two.
2. The *etiology* is an important factor.
3. The *nature of the fluid*. Fibrinous pleurisy (save at the apex of the lung) offers the best outlook. Prince Ludwig Ferdinand ranks the effusive forms as follows: (a) best in metapneumonic serous or purulent pleurisy; (b) next best in serous pleurisy due to the staphylococcus; (c) next in staphylococcus empyema; (d) least favorable in tuberculous, fetid, putrid, etc.

The prognosis is generally poor in hemorrhagic, chyloform, peracute and bilateral (generally hemorrhagic or purulent) effusions. The outlook is better in effusions which contain considerable solid constituents (Méhu and Bernheim); effusions poor in solids are apt to recur. When by cryoscopy the freezing point of the exudate is below that of the blood, spontaneous absorption is unlikely (Rothschild). Since Hippocrates, the belief has prevailed that right-sided are less favorable than left-sided effusions.

4. *Temperature* persisting, sweats, anemia, recurrences, external rupture, etc., are unfavorable.

5. *Sudden death* is more common than is usually appreciated. I saw three cases in 1903 alone.

6. *Ultimate prognosis.* Opinions vary. Eighty-seven per cent become tuberculous in one to two years (Fiedler); 33% die in five years (Bars); 66% are curable (Osler); 15% die of tuberculosis; 90% are in good health after two to five years, and 80% are healthy after five years (Cabot).

DIAGNOSIS.

Diagnosis is based on the physical findings alone. Diagnosis of the pleurisy is the first step, while the second is the determination of its cause.

DIFFERENTIATION.

A. *Pleuritis sicca* is established certainly only by feeling or hearing the friction rub.

1. *From râles* The crepitant râle is largely inspiratory, appearing as a shower of small râles at the end of inspiration. Bronchitic râles or bronchi are continuous. Coughing and deep inspiration alter or remove râles, and may alter the fremitus. While the pleural rub is increased by pressure and deep inspiration. The pleural rub is less extensive. It may disappear after a number of deep inspirations, by the two surfaces becoming smoother for the time being.

2. *From sacculated breathing* and a crackling in the muscles on deep breathing, which are symmetrical.

3. *From intercostal neuralgia*, which is intermittent, occurs in typical attacks, and is limited to the inter-spaces. Valleix's points are usually, but not always, present. When found, they exist at the angle of the ribs, in the middle of the axilla, and anteriorly, corresponding to the points of exit of the posterior, lateral and anterior perforating branches of the intercostal nerves. Intercostal neuralgia is increased less on deep breathing than is pleuritic pain.

4. *From caries of the rib*, in which pain is localized directly over one rib, and not between the ribs.

5. *Rheumatism of the thoracic muscles.* Differentiation may be very difficult, as both affections may induce pain on breathing, tenderness and disturbed breathing.

There may be a history of cold, exposure, or repeated attacks. There is usually no fever, nor cough. Faradization decreases the pain. Movement increases the pain more than in pleurisy.

6. The rub of *pericarditis* (q. v.) is more distinctly cardiac, depending upon the cardiac movements. On holding the breath, a pleuritic rub, heard over or near the heart, decreases after five or six heart beats. On deep inspiration the pleural rub disappears, and the pericardial rub is increased. Confusion is most likely when pleurisy is found over the lingual lobe and left border of the heart, while pericarditis most commonly produces a rub at the base of the heart, especially over *conus pulmonalis arteriosus*.

B. *Pleuritis humida.* (1) *From infiltration of the lung substance* (see pneumonia). The fremitus is decreased in pleurisy; increased in consolidation. If a bronchial plug exists in consolidation, decreasing the fremitus, it can usually be dislodged by coughing. In consolidation the dullness often corresponds to one lobe; the pleuritic dullness increases downward, though the upward border of a pneumonia is sometimes irregular. Only when pneumonia is very great is there any luxation of the heart or involvement in left-sided pleurisy of Traube's space. In consolidation there is a close parallelism between the intensity of the bronchial breathing and the degree of dullness. When there is very slight bronchial breathing, it is probably not pleurisy, although it may exist in some cases. The sputum, the longer course of pleurisy, dislocation of the heart, liver, spleen, etc., the infrequency of chills in pleurisy, the use of the Cyrtometer, the solution by lysis, speak for pleurisy.

Aegophony occurs more frequently in pleurisy. Crepitant râles may be heard in pleurisy along the upper border of the fluid, but are usually transitory. Exploratory puncture is the final test, and also determines the nature of the fluid. The presence of blood, carcinoma cells, streptococci, pneumococci, tubercle bacilli, etc., are diagnostic aids.

(2). *From tumors of the lung.* Here cachexia, narrowing of the chest behind on

the one side, and the characteristic exudate obtain; the latter is often brown (Fraenkel), sometimes chyliform, and contains fat globules (Quinke), and degenerated large cells, which may show mitoses. The glands above the clavicle may be enlarged, as well as those in the mediastinum, producing recurrent laryngeal paralysis, etc. Tumor particles are rarely obtained by puncture or from the sputum, and are only found in carcinoma, since sarcoma rarely ulcerates. In suspected tumors of the lung a trocar rather than a needle should be used. In puncture there is more resistance in tumor. Unverricht observed carcinoma developing at the seat of puncture. In tumors there is less displacement, less invasion of Traube's space, and less widening of the chest than in pleurisy, while the breathing is often bronchial, the flatness intense, and the fremitus increased.

(3). *Hydrothorax*, usually described as bilateral, nevertheless may be unilateral, especially in heart and liver disease, when especially right-sided hydrothorax is observed. Sometimes unilateral hydrothorax is explained by obliteration of the other pleural cavity by adhesions. The fluid often shifts its level on change of posture, which does not occur in pleurisy. Salicylic acid, iodine, and potassium iodide are said to pass readily into transudates, and slowly and in small amounts into exudates (Rosenbach and Pohl), but this claim has been disproven by Weintraub, Leuch and Feldmann. The iodine is detected by adding nitric acid and shaking with chloroform, which is colored reddish.

In hydrothorax, the specific gravity is below 1014, the albumin under 3%, and the sediment shows few white cells and some endothelial cells, which are not pathognomonic of hydrothorax, as has been claimed. Bacteriological tests are negative.

(4) *Hemothorax* is determined only by puncture.

Circumscribed pleuritis in some instances require differentiation.

(5) from *pericarditis*, but they are more irregular in outline and the apex beat is not altered; there is no cardiac insufficiency, pericarditic friction, etc.

(6) Or from *lung cavities*, which give dullness when full of secretion, and resonance when the secretion is voided; the fluid obtained by puncture (under a wrong diagnosis) has a higher specific gravity and a large percentage of fat.

(7) From *splenic tumors*. Respiratory excursion and palpation of the lower edge of the spleen, etc., determine the differentiation.

(8) *Liver enlargements* are rarely solely upwards, save in echinococcus and abscess of the convexity, which are prone to occur anteriorly, while pleurisy is more frequently detected posteriorly. In tumors of the liver there is usually respiratory excursion, which is absent in pleurisy. In rare instances there is a furrow between the costal arch, and the liver, when pleurisy pushes the liver downward (Stokes).

(9) From *subphrenic abscess*, which may be intraperitoneal, as liver abscess, or extraperitoneal, e. g., paranephritic. The liver stands higher in the chest because of the parietic diaphragm. There is a history or the physical signs of previous disease of an abdominal organ. The needle thrust toward the abscess reaches the pus only deep in, and in the lower interspaces. The pus has frequently a fecal odor. The manometer shows increased pressure during inspiration, and decreased pressure during expiration, the converse of the findings in pleural effusion.

Treatment. Etiological treatment applies only to rheumatic and syphilitic forms.

1. *Fibrinous Pleurisy*, which remains fibrinous, or the fibrinous or first stage of exudative pleurisy. *Pain* is the main indication. *Morphine* may be given in severe cases, specially when coughing is troublesome. The ice-bag, blisters, cups, and hot fomentations give little relief in acute pain. The pleura should be splinted by three or four strips of *adhesive plaster*, a couple of inches wide, overlapping the median line before and behind, by about three inches, running around the chest horizontally and obliquely, and applied during expiration with considerable pressure, that the lung in its lower part may be well immobilized; oxide of zinc adhesive is least irritating to the skin. Personal ex-

perience with the early use of salicylates advocated by Aufrecht and Fiedler has not been satisfactory. The patient is kept abed. Leeches sometimes relieve the pleural congestion.

2. *Serous pleurisy* is treated abed, meeting the cough, fever, etc., expectantly. Laxatives are chiefly given to obviate straining at stool, which may induce cardiac weakness. When, at the end of the second week, the effusion shows no sign of resorbing, various measures are advocated. Schroth's treatment consists in limiting the amount of fluid ingested to about 1,000 c.c. daily, but it has few adherents, as exudation is an active, not a passive, process. Tincture of iodine is applied, but is seldom useful, and when old is a distinct local irritant: Potassium iodide, digitalis, drastics to produce copious evacuations, pilocarpine, combined with cognac to support the heart, and sweats are often given. We cannot agree that any of these measures are helpful. Transudates may be removed in this way, but not exudates.

Trousseau's indications for aspiration were: (1) the vital indication (when life is threatened by large exudates); (2) moderate effusion with slow resorption, and (3) persistent or residual exudates.

We believe that early puncture (thoracocentesis) and aspiration are indicated in every case where 2,000 or 2,500 c.c. are effused, whether the temperature is still high or not, whether pressure symptoms or dyspnea are present or not. About this amount causes some dislocation of the heart, liver or spleen, some compression of the lung or some ectasia, as shown by the cyrtometer. Intrathoracic pressure may cause sudden death, sometimes without any warning of cardiac insufficiency. Early puncture does not irritate the pleura, nor favor recurrence or suppuration. Early and repeated puncture obviates lung compression and atelectasis, and compression and torsion of the large arteries. Aspiration was first advocated by Wyman and Bowditch, of Boston, over fifty years ago.

Method. After the usual surgical antiseptic measures, a small trocar or large aspirating needle is introduced, which has an elbow connecting with a rubber tube to siphon the

fluid to a vessel below, or connecting with a bottle which can be exhausted by a pump. There is no absolute rule as to the site of puncture, which is governed solely by the physical signs, e. g., adhesions holding the lung to the surface vitiate any set law; usually fluid is best obtained between the scapular and post-axillary lines, and low down in the chest. The trocar is introduced suddenly to avoid bending of the spine, which narrows the interspaces, and is introduced perpendicularly to the chest wall, not obliquely, so as to avoid the intercostal artery, from whose injury we once saw fatal hematoma and hemothorax. Whiskey and hypodermics should be at hand against syncope. The pump is necessary in but 10% of cases, the fluid usually siphoning readily. The fluid, if pumped, should be withdrawn gradually. The amount removed need not be great, as often moderate relief of intrapleural tension promotes absorption. The limit is set, somewhat arbitrarily, at 1,000 c.c. (Naunyn and Dieulafoy), or 1,500 to 1,600 (Fraentzel and Bowditch). Nearly complete evacuation favors the accidents enumerated below, and is thought by Litten to favor miliary tuberculosis.

Aspiration is discontinued when the exudate becomes bloody (from lung injury), friction develops, pain is felt, or coughing (from congestion of the relaxed lung) intervenes. *Repetition* of puncture depends on results; it may be repeated every two or three days. *Favorable results* are showing and strengthening of the pulse, relief of oppression, increased diuresis, improved appetite, etc., but above all relief of pressure on the lung and absorption of the exudate.

Unfavorable results are syncope, due to cerebral anemia, which in turn results from restoration of circulation in the collapsed lung, a relatively uncommon incident: pulmonary edema; the albuminous expectoration described by Terillon, Besnier, Johnson, Duffin, Scriba, etc., which is due to the sudden withdrawal of too much fluid (2 to 5 litres) at one tapping (it should take one-half hour to evacuate 1½ litres (Fraentzel)); edema pulmonum is best treated by a hypodermic of morphine, gr. ¼, which

may be given before aspiration; sudden death from pulmonary embolism or cerebral embolism, which latter results from discharge of clots from vessels in the relaxing lung, and causes the so-called "pleuritic hemiplegia"; some of these cases are hysterical hemiplegia; pneumothorax; injury to the heart, liver or spleen. When repeated punctures fail, one considers operation (as in empyema).

3. *Empyema* demands operation (practiced by Euryphon, and after him by Hippocrates) in all cases. Some cases may recover spontaneously, but no reliance is placed on this issue. Some advocate treating tuberculous empyema without operation, as Volkmann managed other cold abscesses. Krönlein observed in operation on these cases recovery in 36%, improvement in 28% and death in 36%.

Results depend on the etiology and bacteriology. While Velpeau's mortality was 100%, and Dupuytren's was 92%, the mortality nowadays is but little over 1%.

4. *Putrid pleurisy* is treated like empyema.

5. *Hemorrhagic* effusions may call for gelatin injections subcutaneously; the amount aspirated should not exceed 500 c.c., and aspiration is repeated as seldom as possible.

After-treatment is directed toward prevention of thoracic retraction, to which end gymnastics and deep breathing are essential. A patient having suffered from a "primary" effusive pleurisy should be treated as one with latent tuberculosis.

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THE DIAGNOSIS OF APPENDICITIS IN CHILDREN.*

BY J. H. HESS, M. D., CHICAGO.

Appendicitis in infancy and childhood is one which, apparently, in the literature at least, has not received its just attention. In reviewing the literature I find a very limited number of writers taking up this im-

portant subject in detail, most contenting themselves with the reports of a few cases.

The importance of this field to the pediatrician becomes apparent if we can rely upon the percentage statistics of its occurrence in some of the larger clinics:

Einhorn reports that children between 1 and 15 years of age represent only 2% of all of his hospital patients, from which Selter deducts that appendicitis is seven times as frequent among children as in adults.

Erdman reports of a total of 250 cases of appendicitis with 201 operations. Of these 29 were children under the 10th year, with 22 operations, resulting in 20 recoveries and 2 deaths. All were acute cases, 9 were operated on in the primary attack and 11 in the secondary or multiple attack; in 2 not stated. There were 14 cases of gangrene and perforation; 7 cases of foreign bodies, 4 cases of the latter contained from 6 to 30 pin worms each. As to age, 1 occurred at 3 years, 2 at 5, 3 at 6, 7 at 7, 4 at 9, and 5 at 10 years.

Matterstock reports 46 cases under 10 years of a total number of 474 cases, Fitz 22 out of 228 cases, Sonnenberg 14 out of 130, and Nothnagel 1 out of 130, but the latter believed this to be due to the fact that children are rarely received in his clinic. Griffith has collected 15 cases under 2 years of age, 2 of which, Pollard's and Gayen's, were six weeks of age. McCosh in his first 1,000 operative cases of appendicitis found 1.7% operated in the first 5 years, while 7.5% had shown symptoms, 6.8% operated in the first 10 years, while 17% had shown symptoms during the first 10 years. Clodo has described a fold of peritoneum extending from the appendix to the ovary, the appendiculo-ovarian ligament, which carries a blood-vessel to the appendix. This together with the fact that the appendix of the female is smaller than that of the male, may account for the comparatively small percentage of attacks among girls, according to most authors it is not more than one-half as frequent in male children and infants.

The high percentage of appendicitis in childhood is thought by Salhi to be due to

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the great amount of lymphoid tissue in the appendix at this early age and its tendency to rapid increase and secondary degeneration under prevailing influences, so common does he believe this to be that he definitely names it "Angina of the Vermiform Appendix." Klemm carries the analogy still further by suggesting this to be but a type of the inflammation to which all organs rich in lymphoid tissue are subject, examples of which are represented by lymph-adenitis, tonsillitis, osteo-myelitis, etc. As in case of the tonsils, an organ so infiltrated is readily affected by intercurrent traumatism, circulatory disturbances and injuries by foreign bodies within the lumen leading to early infection, infiltration, ulceration and gangrene.

Speaking briefly of the bacteriology of appendicitis and perityphilitis, the greater number of investigations have shown that as a rule we are dealing with a mixed infection in which the most important organisms are the bacillus coli communis, the streptococcus pyogenes, the diplococcus pneumoniae and the anaerobes, while these forms are frequently found especially in the more virulent types, other forms of bacteria may assume the major role. I wish to note briefly a case of fulminating appendicitis in a 16-year-old boy, seen 60 hours after the first symptoms and operated upon two hours later, in which the distal half of the appendix was gangrenous and at least 12 ounces of fluid evacuated from the general peritoneal cavity, in which the predominating organism was streptococcus. The pus was mopped out with sponges, the cavity drained with cigarette drains and after an uneventful recovery, he left the hospital in 3½ weeks.

It is now generally recognized that the pathogenic powers of bacteria are not determined exclusively by their individual virulence, but, also, and possibly primarily, by the resisting powers of the organism and of the particular tissue invaded by the bacteria. It appears that in the vermiform appendix the various factors which intensify the pathogenic power of the invading bacteria are present; some of these factors have a

tendency to increase the virulence of the bacteria, others to lower the resisting powers of the tissues, while in some instances both of these factors may be at work at the same time. While difficult to prove, it seems highly probable that the appendix with its numerous follicles, is a convenient point of entry for micro-organisms, and thus resembles the tonsils which are also rich in lymphatic tissue.

DIAGNOSIS.

We now come in contact with one of the most complex problems of modern surgery. First, we have before us an individual entity who in all probability has little or no power of interpreting the special symptoms of the complex group from which he may be a sufferer; second, because of his age he cannot be made to understand that it is of prime importance to aid the diagnostician rather than hinder him by crying, restlessness and a general rigidity which almost invariably predominates in the young.

Again the severe diffuse variety is commoner than the simple catarrhal or the latter may rapidly pass into the former and our first realization of the serious trouble at hand be the presence of a general or localized peritonitis.

Let us now recall the classical and less constant findings in our adult cases and briefly treat of them in the order of their seeming importance as applied to appendicitis in infancy and childhood, bearing in mind the differences to be expected in the catarrhal, gangrenous or the perforative stages, respectively.

1. *Spontaneous pain* manifested in the very young by fitful crying and sleep. In typical cases it is at first localized at "McBurney's point" but it soon becomes diffuse, radiating from the umbilicus into the pelvis. Young children complain of "belly ache" and usually lie curled up on one side. More rarely the pain may be referred to the right testicle or to the neck of the bladder because of the close relation with the right ureter, a point which should be carefully borne in mind while operating.

In rarer instances we may have perfora-

tion before we get a history of pain. (Spieler).

2. *Hyperaesthesia*. Tenderness on pressure is apt to be difficult to localize in the young and therefore of little value.

3. *Muscle spasm* or rigidity of the right rectus is present unusually early in children but is difficult to elicit and localize because of the child's fear of examination and its tendency toward rigidity of the abdominal muscles in general. Its elicitation is one of our most valuable diagnostic aids and is a fitting reward after a gentle and patient examination.

These three symptoms when associated with vomiting and constipation make a positive diagnosis possible in at least a majority of cases of older children, but in infancy and early childhood the diagnosis becomes far more difficult because of the tendencies of the child to evade examination and it becomes necessary to look for further aid.

4. Nausea and vomiting are usually present a short time after the onset of pain, it usually ceases as soon as the stomach is empty but reappears again in the later stages of the disease, when perforation has occurred, and abscess formed or an intestinal paresis exists.

5. Chill, rarely seen in the first stages.

6. *Pulse*. In simple cases the pulse usually corresponds with considerable regularity to the temperature, even more so in children than in adults, also as long as the process remains localized, when extensive peritonitis exists the pulse becomes rapid and weak, easily compressible and irregular in character.

7. *Temperature* is unreliable as the worst types may run their course without any great rise of temperature and we may easily have a distinct fall of temperature after perforation and beginning peritonitis. Rectal temperatures only are reliable.

8. *Constipation* is the rule in these cases. Diarrhoea may be present, and the latter cases as a group are less urgent than those associated with constipation whose early occurrence usually indicates intestinal paresis. The absence of blood, bloody mu-

cus, etc., is important because of its predominance in intussusception.

9. *Tympanitis* with gradually increasing persistent abdominal distension is usually a later development.

10. *Flexion of the thigh*, which is usually well illustrated by attempts at extension and flexion of the two thighs.

11. *Unconscious tendency to place the hands in the region of the appendix* to prevent examination of the sensitive area, which unfortunately is not always located in the classical region, but is of frequent enough occurrence to be of diagnostic value.

12. *Rectal palpation*. In older children whose attention can be claimed this method of examination is of prime importance. In simple catarrhal cases I have several times been able to locate the point of greatest pain with accuracy and not infrequently the outline of the inflamed appendix can be palpated through the thin rectal wall in these small pelvises. In later stages its value for locating localized abscesses or intra-peritoneal pressure are of inestimable value.

13. *Tumor per abdominal palpation*, if the illness is of several days' duration, associated with a septic temperature, rigor, leucocytosis, etc., should always lead to the consideration of appendicitis.

14. *Increased frequency of micturition* due probably to the close proximity of the right ureter and bladder to the area of inflammation.

15. *Leucocyte count*. As a rule in children it is not as valuable as in adults because of the great range, under normal conditions going to 20,000 or even higher. Probably the most reliable finding is a decided leucopenia, 5000-8000 in the presence of peritoneal involvement, which indicates either a low resistance or a preponderance of the infection over the natural resistance and is always a finding of ill omen. Probably more important than a simple increase will be a differential count when better understood. Gudobin estimates that in infancy polymorphonuclear cells average 34.6%, mononuclear lymphocytes 59 and transitional forms 6.4%, while in later childhood the polymorphonuclears increase more nearly

to the normal. Remembering these characteristics a leucocyte count of 30,000 or more with 80% polymorphonuclear cells or 15,000 with 90% polymorphonuclear cells should always lead to the suspicion of the presence of pus. In intestinal obstruction the leucocytes may number even 50-80,000, which must not be forgotten. In all cases the accompanying findings must be considered.

16. *Iodophilia test*, which in the presence of pus has some claim to recognition. My own experience with it has not been entirely satisfactory. Although the laboratory findings are of considerable value in the diagnosis of atypical cases, and aid in the prognosis of the most virulent types, they should not, except in rare instances, be allowed to set the time of operation. Therefore, to be of value, we should: 1. Count the number of leucocytes. 2. Make a differential count, remembering the difference between the normal infants and adults count. 3. Stain blood film by special methods. Iodine reaction, etc.

17. *History of previous indefinite attacks of abdominal pain* associated with a tendency to persist, and a slow retrogression of the group of indefinite symptoms is of vast importance and the history should always secure careful consideration.

DIFFERENTIAL DIAGNOSIS.

The surgeon is only too rarely called upon to treat a simple case of inflammation of the vermiform appendix in early childhood. And as the acute initial symptoms may be followed very quickly by the signs of a diffuse infective peritonitis, it becomes necessary for the diagnostician to be well acquainted with the disease in all its forms. The signs of perforation may become manifest after the first defecation, whether it be spontaneous or produced by an enema. It has been my unfortunate experience on several occasions to be called after many hours or days of delay spent in fruitless attempts to relieve the "belly ache," and on two occasions the time of perforation could be definitely ascertained by a history of sudden cessation of pain after a short sharp paroxysm.

Those conditions with which we are most

likely to come in contact and will necessitate consideration for differentiation are probably as follows:

1. Colic. It is distinguished by the absence of localized tenderness and fever, by its short duration and by the fact that the pain is generally less intense. Severe colic in older children should, however, always be regarded with suspicion.

2. Indigestion. From acute indigestion the diagnosis is often difficult at the onset and may be impossible for 24 hours. The pain is usually less severe but the temperature is higher. The pain is not usually localized, and if so, it is more apt to be in the epigastrium or umbilicus. But the same may be true of appendicitis and in the presence of pain, vomiting, localized tenderness, and severe constitutional symptoms, appendicitis is never to be lost sight of. With the former, diarrhoea is the more frequent, while in appendicitis the reverse is true.

3. Intussusception in infants without a palpable tumor requires a great deal of care in differentiation, otherwise an error may be made. With a proper examination and history in a typical case the diagnosis is not difficult. Pain, colic and vomiting are intense and severe from the time of onset. Bloody stools and tenesmus are almost constant. Temperature shows little or no elevation at the onset and in the presence of a typical tumor palpable through a more or less lax abdominal wall only moderately hyperaesthetic our diagnosis should be complete. This was well illustrated by a case which I operated upon this afternoon in which there existed a highly oedematous tumor, of 29 hours standing, involving over 30 inches of intestine and in which case the child seemed to suffer a minimum of pain upon deep abdominal palpation, allowing the same to be made without crying or resistance.

4. Acute intestinal obstruction. Its onset is more abrupt, pain of severer type, remissive in character, and referred frequently, though not always, to the seat of the obstruction. There are absolute constipation and suppression of flatus, with early and persist-

ent vomiting, soon becoming fecal, a condition rarely occurring except in the later stages of appendicitis. Shock and collapse appear earlier in obstruction than in appendicitis.

5. Psoitis, which is usually of traumatic origin and associated with a deformity due to retraction of the thigh, but is rarely accompanied by the typical findings of appendicitis and more frequently taken for a Pott's disease.

6. Pott's Disease. The absence of intestinal symptoms, curving of the lumbar spine when the limb is brought into a fully extended position, the characteristic deformity, inability to execute the normal movements of the joint, and pain referred to the knee are sufficient to characterize the disease of the hip-joint.

7. Renal colic is usually ushered in by a chill, and the excruciating pain is more perceptible posteriorly than anteriorly, and radiates along the course of the ureter into the ovary or testicle, and is diminished by the voiding of urine. There is usually absence of temperature, abdominal rigidity and localized pain in the right iliac fossa. Blood is frequently found in the urine.

8. Biliary colic. Fever is absent in uncomplicated cases, history frequently of previous attacks accompanied by jaundice, clay-colored stools, and higher location of seat of pain with frequently a radiation upward and posteriorly to the scapula are all points of differentiation.

9. Perityphilitic or perinephritic abscess. They may be secondary to appendicitis, the abscess taking this course rather than a peritonitis, and the pus may then track up the back for a considerable distance where it may be opened in the loin. In primary cases of the latter there is rarely disturbance of intestinal function.

10. Pneumonia and pleurisy. Both present a tendency on the part of the child to refer to the abdomen the pain really felt in the chest. Associated with this pain are, constipation and abdominal tenderness with distension, symptoms which commonly usher in an attack of pneumonia and early produce a

clinical picture simulating appendicitis. Differentiation is usually possible by carefully noting the history of (1) a sudden rise of temperature to 103 F. or thereabouts and the tendency to maintain this degree with usually a preceding history of chill or convulsions; (2) the acceleration of respiration which is out of proportion to the pulse rate or the pyrexia; (3) the relaxation of the abdominal walls between respirations; (4) the disappearance or diminution of tenderness on deep pressure with the flat of the hand; (5) the possible presence of cough. No operation for appendicitis should be undertaken until after careful and repeated examination of the lungs have been made.

11. Tubercular peritonitis, must be considered in differentiating the more chronic forms. The clinical history, physical findings other than abdominal lesions and early ascites and progressive course make differentiation after prolonged observation in most cases possible.

12. Incipient inguinal hernia. It is usually not accompanied by a rise in temperature or abdominal rigidity. Examination of the hernial orifices should be made in all suspected cases of appendicitis.

13. Typhoid fever. A Widal reaction is of great assistance as are also the absence of the usual physical findings and low leucocyte count. The most difficult complication to differentiate is a perforating ulcer in an ambulatory typhoid case.

14. Infection of Meckel's Diverticulum. Very rare except early when still attached to the umbilicus, when the infection and distension shows itself in the scar of the cord. The same may be said of a patent urachus.

15. Torsion of the cord of an undescended testicle. A case of torsion of the cord of an undescended right-sided testicle, which the author recently saw in consultation, presented many of the findings of intestinal obstruction, but upon careful examination the true condition became apparent and was confirmed by operation.

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Bibliography.

Alapy, H.: Arch. f. Kinderheilk. Vol. XXXVIII, p. 241, 1904. (Early operation in

appendicitis with a special consideration of appendicitis in childhood.

Brannan, J. W.: *Medical Record*, N. Y., April 30, 1904. (Appendicitis in young children.)

Churchill, F. S.: *Colorado Medical Journal* May, 1903. (Appendicitis in children.)

Deaver, J. B.: *Jour. A. M. A.* Sept. 24, 1904. (Factors in the mortality of appendicitis.)

Erdman, J. F.: *New York Med. Jour. and Phila. Med. Jour.*, Mar. 19, 1904. (Appendicitis in young children.)

Einhorn: (Inaugural Diss. Munchen, 1901.

Griffith, J. C.: *Archives of Pediatrics*, August, 1898. (2 cases with successful operations aged 3 and 4 years respectively.)

Karewski: *Deutsche Med. Wochenschr.* 1897 Nr. 19. (Perityphilitis in children.)

Klemm: *St. Petersburg med. Wochenschr.* 1901 Nr. 21. (Etiology of the acute infections of the vermif. appendix.)

Manley, T. H.: *Jour. A. M. A.* June 1, 1901. (Diagnosis and symptomatology in the appendicitis of children.)

Matterstock: *Gerhard's Handbuch d. Kinderheilk.* Tubingen, 1880. Bd. W. 2 Abtlg. (Perityphilitis.)

McCosh, A. J.: *Jour. A. M. A.* Sept. 24, 1904. (Appendicitis in children.)

Selter: *Arch. f. Kinderheilk.* 31, Bd. 190. (Perityphilitis in childhood.)

Spier, Fritz.: *Wiener klinische Wochenschr.* Jan 7, 14 and 21, 1904. (Acute skolioiditis and Perityphilitis in Childhood.)

WATER SUPPLY.

BY J. M. G. CARTER, A. M., M. D., SC. D., PH. D., WAUKEGAN, ILL.

Professor emeritus of Clinical Medicine in the College of Physicians and Surgeons, Chicago (Medical Dept. of the University of Illinois); some time Professor of Pathology and Hygiene; Fellow of the American Academy of Medicine, the Chicago Academy of Science, the Academy of Social and Political Science; member of the American Medical Association; ex-President of the Illinois State Medical Society, etc., etc.

A supply of water for purposes of drinking, bathing, washing and industrial uses, demands first consideration whether one contemplates establishing a home, building a factory or founding a city.

The principal sources of supply may be briefly stated as: (1) Rain water; (2) surface water; (3) running streams; (4) underground water; (5) artesian wells; (6) lake water.

(1) Rain water is generally most nearly free from mineral and organic foreign substances, except particles contained in the air which are washed down. This water collected in barrels and cisterns furnishes much

of that used for drinking and household purposes in many villages and in newly settled districts. Many farmers and others use cistern water from choice for drinking purposes. The water is soft and those who use it continuously like its flavor. The laundry-maid is most pleased when she has a supply of rain water. Where it can be secured free from dirt, soot and the accumulations of city life, it is very desirable as a pure drinking water; but E. F. Bureh¹ reports cases of typhoid fever due to drinking water contained in a barrel.

(2). Surface water is rain water which remains on or near the surface-soil, without outlet or inlet. This often becomes stagnant. Ponds, swamps, sloughs are familiar illustrations. This water, in the case of swamps, bayous and similar bodies, is often the remains of running streams, but becoming stagnant assumes dangers not so characteristic of running water; and Leighton² says that such waters are dangerous to the neighborhood. Familiar dangers to be recalled here, are the breeding of mosquitoes, the vicious bite of which often conveys the causes of malaria, yellow fever and perhaps other diseases. It is unfortunate for the family or individual who must rely upon such water supply. In portions of the South, Cuba and some other regions, there is nothing better for some of the poorer classes. The wells—or ground cisterns—dug in the drift or alluvium of many regions, furnish merely surface water, which is better than that described above only because it has been filtered through the soil. If the filtering is through sand it may furnish fairly good water. Cases of typhoid fever in my own practice have frequently been traced to the drinking of water from such surface wells. Many of my confreres have assured me that they have had similar experience. The ground-water of the text-books is included here. Running streams may be included in "surface water," and only furnish better water for household purposes because the continual agitation or motion of water as in flowing streams and waves of bodies of water is one of Nature's ways of purification. Water in a constant state of movement, as

in a running stream, a river or large lake tends to become pure, in part at least, because different particles of it are constantly coming in contact with the atmosphere and undergoing fresh aeration. Motion, in water, as in all other entities of the universe, seems to be the law of perfect function. Motion, however, is not always a guaranty of purity, for cases of typhoid and other contagious diseases have been traced not infrequently to sources of infection several miles away, from which the toxic agent has been brought through the water of a running stream. Time, distance and the action of the sun's rays all aid in purifying running water.

(4). Under-ground a sub-surface water was formerly supposed to be ideal for household uses. Spring water is generally a favorite. Many prefer it to any other variety of water. By underground water I mean running water under the surface soil, which sooner or later finds an exit from the ground. Besides springs, underground streams should be included here. In the southern portion of the United States in regions near the Tennessee and Columbian ranges, and near other ranges in America, as in other mountainous countries, there are many beautiful illustrations of underground water, gushing in cold, sparkling streams from the ground or from under some rocky ledge. In these regions, villages and cities have felt themselves fortunate to secure such apparently pure supplies of water. This has been a favorite supply in France, and until recently no fear was felt regarding their drinking water. It should seem that the accumulation along the ridges and sources of these underground streams might long ago have aroused suspicion in the minds of those who used this water. The inevitable has happened. With the progress of science and the search for causes of disease, at first this kind of water supply was suspected and then experiments have led to a knowledge that these sources are often impregnated with disease germs, which have been the cause of epidemics of typhoid and other fevers in the community supplied by this water. The Paris authorities³ became uneasy, partly be-

cause they suspected the purity of the water and partly because the supply needed replenishing, and in 1902 introduced filtered water from the Seine into certain portions of the city. The water of the Seine in its untreated state is not above suspicion and filters were introduced to clarify it for drinking purposes. The result was astonishing. There was an immediate diminution of typhoid fever in that portion of the city supplied with filtered Seine water, and in one district there was not a single death during the epidemic of February and March, 1904. Thus it may be seen that underground water is falling into disrepute as a pure drinking water, at least in France.

(5). Artesian wells, when properly constructed, that is, when the iron tubing extends down to the rock from which the water rises, furnish water almost or quite free from organic matter; and not only so but if the tube reaches the source of supply the water is often as soft as lake water. Green Bay, Wis., is supplied in this manner, I am informed by Dr. Beck of that city, and Dr. Slaughter of the same place says that analysis shows the water to be pure for drinking purposes. Waukegan was formerly supplied by water from artesian wells. During that time not a single case of typhoid fever occurred in families using the artesian water, nor in any other family was infection ever attributed to water from the artesian wells.

Artesian water, then, seems to be desirable where it can be secured in sufficient quantity and especially in interior villages and towns.

(6). Superficial bodies of water of considerable size—lakes. A large lake is in a constant state of motion. This agitation brings the surface layer more freely in contact with the atmosphere and sun's rays and in consequence a greater number of particles of water are oxygenated or aerated during a given period than could be the case in still water. Hence, such a body furnishes a relatively pure water. The proximity of cities which empty their sewage into lakes renders this water suspicious when the supply is obtained near the shore. If the intake is put

out beyond the limits of sewage contamination, a very palatable and satisfactory drinking water can be secured from large lakes.

The environment of the source of water supply should be carefully examined, as Westbrook⁴ suggests, in order that proper precautions may be taken to prevent epidemics from contaminations. A bacteriological examination should be made, for this is of more value⁵ than a chemical examination, and W. G. Bissel⁶ warns against the mistake of neglect in this particular. It should be borne in mind that it is better to seek a source of pure water than to try to purify a contaminated source⁷. Whatever the source, the authorities should have a bacteriological examination of the water made to enable them to control the supply⁸ and furnish pure water. The importance of furnishing pure water has been further demonstrated by Hurtz and Burges⁹ in their experiments upon vegetables. They found that if cabbage, radish, etc., be sprinkled with water containing bacilli of anthrax, typhoid or tuberculosis, the plants retain the germs unless exposed to the sun's rays. Furthermore, they find that if these germs be buried with the seeds from these vegetables, the germs come up with the new plants. This remarkable fact illustrates the possibility of epidemics springing from plants growing from seeds planted near or over bodies dead with some infectious disease.

PURIFYING WATER.

(A). Municipal. (a). Agitation when done by Nature as in running streams or the waves of the lake, goes far toward purifying water, but artificial agitation cannot be applied with great hope of success. (b) Settling wells have been used in many instances with considerable success, and with the addition of the copper treatment may become a favorite method of treating impure waters. (c) Filtration through sand has been found to give the most satisfactory results. When properly carried out this is of more value than mechanical filters in reducing impurities; sand filtrations reducing the impurities¹⁰ in the ratio of 78.5% while the mechanical filters reduce them 26%.

Some astonishing and extremely interest-

ing facts have been observed in relation to sand filtration. Reference has already been made to the experience of Parisian authorities, who secured purer water by filtering the water of the Seine than they were receiving from springs and mountain streams. We are informed¹¹ that other European cities have secured most satisfactory results from filtration. Berlin is supplied with water from lakes, this water is filtered and the death rate from typhoid fever has been reduced to $7\frac{1}{2}$ per 100,000. The average of 28 cities in America was 50 per 100,000. Hamburg, which is supplied from the Elbe, by filtering the water, reduced the typhoid death rate from 28 to $7\frac{1}{2}$ per 100,000. By filtration London has reduced its death rate from typhoid fever to $14\frac{1}{2}$, and Rotterdam to 4 7-10 per hundred thousand. The principal cities of America show higher death rates because their waters are generally not filtered. The Hague water is secured from driven wells and is also filtered. The death rate from typhoid for six years averaged 5 per 100,000. Filtration of lake water through sand by means of wells has been tried with success by a number of cities. Superior, Wis., is one of these. I have received a letter from Dr. Renne, the commissioner of health of that city, in which he assures me that, whereas they had many cases of typhoid fever before installing the present filtering system, now the disease is practically banished from the city.

Probably at the present time no other method of water purification for the municipality is in such high repute as sand filtration; and wherever that method can be carried out no official should hesitate to select it and urge its adoption.

(d). There are localities, however, where filtration cannot be practiced in perfection because of financial or other conditions. In reservoirs, small lakes and settling wells certain forms of algae grow and render the water impure, giving it often a disagreeable odor. The same conditions may prevail in cisterns and barrels containing rain water. Agitations of these waters renders the odors worse because the little oil sacs in the algae are broken up and it is chiefly the oil which

gives the odor. To meet such difficulties and to try to discover some good method of rendering waters free from algae the laboratories of the government at Washington made experiments with various substances. According to Dr. Geo. T. Moore¹², the substance which gives most satisfactory results in these cases is copper. The preparation used is the sulphate. His experiments, which have extended over much time and have been conducted with rare skill, demonstrate that algae can be destroyed in a few hours by introducing the sulphate of copper into a reservoir or other water container. It is only necessary to use a quantity sufficient to make the water a solution of 1 part in 4,000,000 to destroy some of the most troublesome varieties. A most remarkable and valuable feature or discovery of the experiments was that the water thus treated is copper free in 24 to 48 hours, rendering it a wholesome and palatable drinking water. Even if the copper were not removed, the amount of the substance one might get should one drink a gallon of the water a day would be so small that not even a child or the most sensitive female could feel the slightest effect.

Since these investigations were made several cities have been induced to make trial of the method, and the results have been uniformly successful and eminently satisfactory. Of these may be mentioned Butte, Mont.; Boston, Mass.; Elmira and Cambridge, N. Y.; Baltimore, Md.; and Winchester, Ky. Such remarkable results attended this phase of the investigation that Dr. Moore undertook to determine the effect of the copper treatment of water upon pathogenic bacteria, especially the bacilli of typhoid, dysentery and cholera. The results here were as amazing as in his preceding experiments. Stronger solutions had to be used, however; still the effect of the copper upon these germs is so powerful that they cannot survive in a reservoir which contains one part of copper sulphate in 100,000 parts of water. The bacilli were totally destroyed by that quantity of the copper. It has been asserted that those laboring in copper works have gone through a cholera epidemic with entire freedom from the disease. (Chairman¹³ State

Board Health, Mass.) Dr. Moore further states that colloidal solutions of copper—that is, solutions of the metal, not a compound of it—also have a distinctive effect upon algae and bacteria; and suggests that the suspension of metallic copper sheets at the intake of the reservoir might serve a good purpose for purifying water. Whether a system of copper sheets can be arranged so as to come in contact with every particle of water entering the intake from the lake and thus accomplish something toward the purification of a city's water supply is a matter which will bear investigation. Indeed, the experience of others might justify a trial of such a system of metallic sheets, in a city with a lake too large to be dealt with as an ordinary reservoir. It would require, however, that the metallic sheets be kept clean and bright. It must be distinctly understood that this method cannot take the place of filtering and boiling. It is only supplementary.

Those who are interested in this subject and desire to make trial of the method are invited to consult the Bureau of Plant Industry at Washington for detailed instructions.

The writer has prescribed a compound of copper for typhoid and other intestinal infections during a period of several years, and with such gratifying success that he has lost but one case of typhoid fever. Indeed, that case should not be ascribed to a failure of the treatment, but to a perforation resulting from beginning manual labor nearly a month sooner than the time prescribed.

(B). Purifying water for domestic use.

Kupffer¹⁴ has given a simple test for potable water which is easy of application. Make the following solution: 1 part (5j) tannin; four parts (5iv) distilled water; 1 part (5j) spirits of wine. To a glassful of water to be tested add a teaspoonful of the clear (filtered) solution. If no turbidity occurs in five hours, the water is good; if the turbidity occurs in an hour the water must be classed as unsafe, if not dangerous; if the turbidity occurs in two hours the water is not to be recommended; and if it turns brownish in three hours it contains am-

monia, but is perhaps of average composition.

1. Filtering is a common and satisfactory method of purifying water when properly done. The small, cheap filters placed upon the market are, in many cases, worthless. From experiments often made with sand filtration one would be inclined to favor filters made of sandstone. The writer has used such a filter for several years. The water is always as clear as crystal, freed from odors, and several microscopic examinations have shown it to be bacteria free. More expensive filters can be had, some of which are very good. To meet the needs of the poor, however, something different must be suggested. Several forms of temporary arrangements for filtrations have been suggested. The writer has known the following to be used with quite satisfactory results: Take a large container, barrel, tub, keg, can or stone jar with an opening or faucet at the bottom; make it perfectly clean and cover the floor of the container with clean gauze: put upon this a layer of clean gravel $2\frac{1}{4}$ inches thick; cover this with a layer of charcoal of the same thickness; upon this put a layer of clean sand of a thickness equal to one-half the depth of the vessel or container. The water is to be poured upon the sand and allowed to filter through the layers. Water from the lake, pools, ponds, swamps or rivers will be rendered beautiful and palatable by such filtration and disease often may be averted. These filters need to be renewed from time to time, depending upon the size of the container. A very small filter prepared from these suggestions should be renewed daily. The excellent water thus secured is sufficient reward for the trouble and time required to prepare and renew the filter.

2. Where water cannot be filtered and where suspicion of impurities rests upon filtered water, it should be boiled. Boiling for half an hour will destroy most if not all pathogenic bacteria and is the safest method that can be employed by most people.

3. The most satisfactory method which assures a water absolutely germ free is distillation. The first cost of a still large enough for a family may not exceed that of

a good filter. The great expense is in its use. Indeed that expense is not great as compared with other luxuries enjoyed by the average family. The family who can afford 3 to 10 cents a day for pure water should at once invest in a still.

4. Finally, if there is enough virtue in metallic copper to justify its recommendation to municipal authorities for purifying city water, surely it is to be recommended to the family. The use of copper kettles, pans, pails and cooking utensils should render the family largely free from dangers of germ infection due to water.

The use of the sulphate of copper in families is a problem for the profession to work out. If at the end of 24 hours the water shows traces of copper it may be precipitated by some hydroxide or carbonate.

References.

1. New York Med Jour., April 5, 1902.
2. St. Paul Med. Jour., April, 1904.
3. Jour. Am. Med. Assn., Vol. 43, p. 2038.
4. St. Paul Med. Jour., October, 1904.
5. British Med. Jour., Dec. 21, 1901.
6. Phil. Med. Jour., Aug. 30, 1902.
7. L. H. Laidley, St. Louis Med. Rev., Nov. 29, 1902.
8. Conn., International Clinics, Vol. 2, 1903.
9. Arch. de Med. Experimentale, 1901.
10. Jour. Am. Med. Assn., April 27, 1901.
11. Blair Med. Brief, Vol. 33, p. 244.
12. Bulletin 64, Bureau Plant Industry.
13. G. H. Grosvenor, Cent. Mag., Vol. 69, p. 214.
14. St. Petersburg Med. Wochens., Sept. 21, 1901.

THE SURGICAL TREATMENT OF SCIATICA.

BY M. R. BARKER, M. S., M. D., CHICAGO.

In discussing the treatment of sciatica we are again confronted with a name conveying no idea of the etiology or pathology of the disease for which it stands. It has been proven that this complex condition known as sciatica may be established and maintained by the continued action of various causes. Among which we may mention traumatism, cold, infection, etc. It is also well known that the disease may exist and continue indefinitely with no ascertainable cause. In other words, it is not always secondary to some other condition. We do not

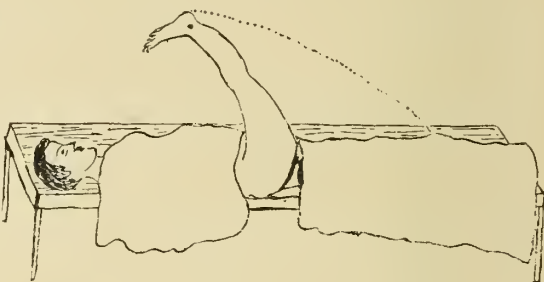
positively know the true pathology of sciatica, but reasoning from cause to effect we believe that the cause in any given case, whatever it may be, for instance, a tumor in the rectum or a retroverted uterus, impinging upon the nerve, first irritates causing a neuralgia, but by its continued action causes an inflammatory process of the nerve sheath with adhesions between the sheath and nerve substance and a thickening of the sheath with a narrowing of its calibre. Hence a binding of the nerve substance by its contracted sheath.

When this condition obtains the removal of the primary cause does not cure the disease. For instance, if the cause is a retroverted uterus, a ventro fixation of the uterus will not break up the adhesions between the nerve sheath and the nerve substance nor release the nerve substance from the grasp of its inflamed sheath. Neither can the disease be cured while the pernicious influence of the primary cause exists. Hence to successfully treat this condition we must search out the primary cause, if possible, and remove it and then apply such treatment to the nerve as will undo the mischief done. The object of this paper is to present a reasonable treatment for sciatica based upon the above etiology and pathology.

For clearness of description we will divide the treatment into two parts. First, the dry or bloodless stretching of the nerve. Second, the introduction of normal salt solution between the nerve sheath and the nerve substance. Paul Voct and Valentine long ago formulated some rules for a guide in nerve stretching. Among them were these: "A nerve is only elastic and stretchable within certain limits, that if those limits are exceeded rupture of the nerve or of some of its fibers results and disaster follows. That this limit does not much exceed the normal limit of motion of the part supplied by the nerve." They also proved that nerve stretching in a *moderate degree* lengthens the primary fasciculi and thus decreases their caliber, freeing them to some extent from any pressure that may be exerted upon them by their sheath, and that such stretching does not produce ill results.

The dry stretching of which we have spoken is done for the reason set forth by Voct, it lessens the caliber of the nerve substance and thus relieves the pressure upon it by a contracted sheath. It is performed as follows: The patient is placed upon his back on the operating table and anaesthetized. The diseased limb is grasped thus, the heel by the right hand of the operator, while the left hand is placed in front and above the knee. The limb is then placed in extreme extension, being thrown up over the body as seen in Fig. No. 1, a considerable

Fig. No. 1



force being used. The limb is held in this position a few seconds and then relaxed for a few seconds. This maneuver is repeated ten or twelve times, which completes the stretching and which has not exceeded the rule prescribed by Voct. The second part of the treatment consists in the injection of normal salt solution beneath the diseased nerve sheath. To do this the nerve is exposed by an incision between the trochanter-major and the tuberosity of the ischium. All of the tissues are separated from the nerve as far as possible both longitudinally and laterally, but the nerve is not raised out of its bed and must not be on the stretch when the injection is made. The reason for this is apparent. As the salt solution is forced between the nerve sheath and nerve substance the two are separated and the adhesions between them broken up. The further they are separated within reason the more surely are the adhesions destroyed. A common aspirator with a barrel holding a half an ounce, having a needle about four inches long, is a satisfactory instrument with which to inject the salt solution. The

point of the needle is forced through the nerve sheath and run either up or down beneath the sheath about a half an inch when the contents of the syringe is forced in. When this is done the nerve sheath is seen to expand considerably. This process is repeated eight or ten times, changing the direction of the needle each time. This terminates the treatment. The wound is closed, the patient put to bed, massage is practiced every day for ten days, and the patient made to use the limb from the first.

Dr. A. H. Ferguson has used this treatment a number of times with perfect results. Some of his patients having been treated five years without a return of the disease. The only difference between his treatment and the one I have used and described is, Dr. Ferguson while the patient is still anaesthetized injects into the nerve the salt solution without exposing the nerve nor isolating it from the tissues about it. He introduces a long needle to the point where in his judgment he has entered the nerve and injects the fluid. To a less experienced surgeon this would be uncertain work. Dr. J. Lange reports in the *Münchener Med. Woch.* the successful use of normal salt solution with a little eucaïn—B injected into the nerve. He uses from 70 to 100 c.c. of the solution. He introduces a long needle without general anaesthesia, being apprised of entering the nerve by the pain it causes the patient. He does not stretch the nerve. He reports ten successes and one failure by this method.

To recapitulate:

1.

We believe that sciatica is at first a neuralgia but later becomes a neuritis, with adhesions between the nerve sheath and nerve substance and a contraction and thickening of the nerve sheath.

2.

That the primary cause must be removed if ascertainable and a treatment applied to the nerve which will relieve the nerve substance from the pressure of its contracted sheath and break up adhesions between the nerve sheath and the nerve substance.

3.

That the bloodless stretching of the nerve,

and the injection of normal salt solution by the open method as herein described best meets the indications.

Dr. Lange, as we have stated has treated eleven cases with one failure. Dr. Ferguson reports four cases one of which has been treated for five years and none of them for less than two years and no recurrence in any of the cases. I have three cases to report all treated by the open method herein described and all treated within the last year. Of these three cases two were males and one female. They were all typical cases of sciatica. The males were both suffering with internal hemorrhoids and constipation. They had suffered from three to five years respectively. The female had a retroverted uterus which was bound to the posterior pelvic wall by adhesions. She had been suffering for one year, but for nine months of the time was bed ridden for the reason that she could neither sit nor stand by reason of the pain. The hemorrhoids were removed, and a ventrofixation done upon the uterus. These cases were fully relieved of suffering from the first and are now practically as well as they ever were. All the work on each patient was done at one sitting.

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SOME OF THE NEWER REMEDIES.*

BY JOSEPH C. BECK, M. D., CHICAGO.

Gentlemen: My purpose in bring this subject before you this evening is two-fold:

1st. To report the results obtained from the use of some of these remedies.

2d. If possible, to obtain your opinion in a discussion as to the advisability of trying these remedies, of which there are such a vast number in the market, and constantly more of them being added.

This latter phase of my paper does not perhaps, belong to a discussion of a special society as ours, and I shall not, therefore, devote much time to it.

In looking up the literature on *Newer Remedies*, I was able to collect 11,064 such

*Read at meeting of Laryngological and Otological Society, March 7, 1905.

compounds as are recognized and used in the medical profession. It seems to me the important question to decide for ourselves is how or what to find out about these preparations as to their value.

Most frequently we are presented with a few samples by an agent or a salesman, who takes up our valuable time explaining the anatomy, physiology and diseases, and whatever his remedy, it is better than any other, and in exchange for a card will leave the samples on our desk, or else mail us literature or samples, and this is constantly making up the bulk of our mails, which, again, requires time to examine and read. Most frequently these are thrown into the waste-basket or put upon the shelf for the purpose of giving to some poor patient free of charge, without particularly making a record of what was given, and when said patient returns and reports either progress or no improvement, perhaps the condition worse, one does not know what was given. Should we, therefore, refuse to listen to these agents and try out any of these modern remedies but simply stick to the old pharmacopea and prescribe our often chemically incompatible or nauseating mixtures.

There certainly must be a happy medium, because there are many new compounds put upon the market that are a distinct advantage to our therapeutic measures, and I would not want to do without the use of them.

It seems to me therefore, that if there would be some controlling body of men, who would have to pass upon the real value of a drug or compound after it has been thoroughly and scientifically tried in clinics and hospitals and statistics published under their supervision in some journal, as for instance, in the *Journal of the American Medical Association*; statistics that are reliable, we would not have so many compounds of the same kind, only differing in name and appearance. There would be less chance for substituting, because the way matters are now, outside of a few of our drug stores in the center of the city, the druggists do not and cannot keep all the new remedies in stock and they either delay the filling of the prescription or use a substitute, condi-

tions that cannot be very well controlled by us.

The new remedies that I have selected to speak to you about, I have tried out clinically, I mean in my private practice as well as dispensary and hospital, with a fair record of the same, and have tabulated them with the results obtained. But since the reading of that report would be too lengthy and not absolutely necessary, I will just name the essential points. First, name of the drug, second, conditions used in, and third, results obtained. Fourteen preparations of which eight are for local treatment and six internal.

Most of you are familiar with the majority of these preparations, and I hope you will, in the discussion bring out the results obtained by you in the use of similar drugs.

Case 1. *Anaesthesin*. Case of Miss S: Painful ulcer of the septum. A local application of 5% ointment two times daily relieved condition immediately.

Case 2. Mr. L: Painful ulceration of the tongue, (specific). The use of *anaesthesin* bonbons. Relief invariably so that patient could eat a meal in comfort, without that it was impossible.

Case 3. Master C: Earache. Hot drops of *anesthesin* in oil, 5%, absolute relief.

Case 4. Mr. H: Acute pharyngitis. painful deglutition. *Anaesthesin* spray 5%, followed by relief.

Case 5. Mr. F: Hypersensitive rhinitis. The only remedy that would lessen a constant itching in his nose was a 5% spray of *anaesthesin* in oil.

Case 6. Mr. D: Eczema, with intense itching of the external auditory canal. 10% ointment of the *anaesthesin* relieved the itching.

I have treated a number of other conditions where pain or hypersensitiveness was the principal symptom and was rarely disappointed in the action of this drug.

ARGYROL.

For more than a year I have used from five to twenty-five per cent *argyrol* solution as a routine treatment in nasal pharyngeal affections, but finally gave it up because I could see no appreciable effect that the rem-

edy had on the condition, and now resort to the old reliable nitrate of silver solutions.

I have found it of some value in chronic suppurative ears, and it seems to me that its action is limited more to the eye, than the ear, nose and throat.

ADRENALIN.

It seems unnecessary to speak about the merits of this drug, because it has been so universally used and accepted as giving absolutely good results. But I only wish to make a few points about it, which may be of interest. Much has been said against the use of it owing to the secondary bleeding in operations, and I want to say that I have had my share of that trouble, still, I would not do without the use of it.

I refer to the peculiar action that this drug has had on two of my cases, viz: producing shock. In both of these cases there was no cocaine used, but symptoms very much like it appeared.

I find that Toeplitz of New York has similar experiences from the use of Adrenalin and explains it as due to the ischemia of the nasal mucous membrane, an extension into the inner cranial cavity, causing there marked ischemia of the meninges and, eventually the brain. This is, of course, theoretical, but the only explanation that I am able to find in literature. Futterhoff has also had such experiences and says it is due to reflex-action on the nasal nerve.

As to adrenalin itself, I prefer it to any preparation of this suprarenal extract, having tried the adrenalin, adrin, adnephelin and epinephrin.

ASPIRIN.

In all cases of grippe like effects, associated principally with ear, nose and throat diseases. I have found this remedy par-excellence. In doses of five and ten grains, I have obtained immediate relief. In several cases of acute frontal sinusitis, with marked pain, it acted admirably, though in somewhat larger doses, say five to ten grains three times per day.

BROMOTONE.

The bromides are used by all of us considerably in our ear cases where tinnitus aurium is such an annoying symptom, and

these salts are not alone very unpleasant to take but will disturb the stomach and produce bromism. My substitute for the salts of potash soda or potash is bromotone. In doses of 15 grains three times per day, and I have found it to be of absolute satisfaction. I do not mean to imply by that that the tinnitus was cured, or perhaps greater improvement followed, but simply that the unpleasant symptoms due to the ordinary salts were eliminated, and the patient preferred to take the bromotone.

CAMPBOR OXOL.

After more than two years experience with this remedy in chronic sup. ear diseases, I will say, unhesitatingly, that it is the best cleanser and deodorizer I have found. It is a remedy that can be given into the hands of the patient with safety and for home use. It has decided advantages to the ordinary syringing of the ears by eventually infected syringes and solutions. The alcohol contained in the preparation causes the patient considerable pain and burning, but this is only momentarily, and the patient soon gets accustomed to it. It may be diluted for children from ten to twenty-five per cent of the solution. After the use of this drug for a few weeks, I often substitute a dry gauze treatment.

IODONUCLEOIDS.

Since this is a home product, and the use of it is an every day occurrence, I have been able to come to some conclusions as to the value of this iodide preparation in comparison to the iodide of soda or potash, salts or iodipin. When this preparation was first put upon the market I was told that it was superior to the other iodide preparations in that the same results could be obtained in very much smaller doses without the producing of iodism, or the disturbances of the stomach or acne, etc. I immediately selected three cases in which I reported at the Chicago Medical Society the first report of this preparation by Dr. Baum. I then found it wanting, as I also found it later while I was using the small doses, and when I went back to the use of iodipin, I was very much relieved at the immediate change of the condition to the patient. It soon followed that the small dose of iodonucleoids had to be in-

creased the same as one does with the other iodides and when I did so the change became apparent, that is, better results were obtained. I, therefore, wish to state that I increase the dose of iodonucleoids the same as I would the K. I. and Na. I. in any case of Lues, and I obtain results equally as good as when I use the old, reliable remedies, without any gastric disturbances or other symptoms of iodism, which is a distinct advantage.

I had some patients who could not stand iodonucleoids but such patients usually could not stand the other iodide by stomach, and in those cases I used iodipin (Mercks) subcutaneously injected. It certainly requires some courage in cases of a gumma where active ulcerative processes are a distinct history to try a new remedy when one knows what an old reliable remedy will do. But how can we ever find out unless we try them and report our honest results of a well observed case. The use of a remedy that has distinct advantages to an older, is my plea, or an excuse for using iodonucleoids. I have had cases where larger doses of iodonucleoids would show no particular result, and when I switched to the other remedy could see immediate improvement. But this condition did not occur very often.

Iodonucleoids are used principally in Lues but also used in chronic catarrh states where I wish to use some alternative or cause hastening absorption as f. i. O. M. C. C.

In fact, using our old German proverb:

"If you know not the reason why,
Use K. I."

IDOVOASOGEN.

In atrophic rhinitis, or any dry form of rhinitis, where massage is indicated as a routine local treatment the use of this oily substance thoroughly rubbed over the surfaces, seems to be followed by considerable relief, without influencing very much the pathological condition, as the regeneration of the structures.

UCAIN LACTATE.

It is, perhaps, too early to report on the use of this drug, having used it only in a small number of cases, but an adverse report of a remedy that is so highly recommended by the European men, may find room for dis-

cussion, since Dr. Pearce has told us that he has used it.

In the few cases that I tried the 15 per cent solution applied to the nasal mucous membrane for operative procedures, I have found it wanting in every case. I was compelled to reanaesthetize with cocaine before I could proceed with the operation.

POLLANTIN.

Our latest discovery is a positive cure for hay fever. It is the antitoxine against this malady, and you are all familiar with it from personal observation as well as literature. I, therefore, need not go into a detailed description of the same.

Last year Dr. O. G. Stein presented to us a report of this substance, which was very encouraging. I have treated twelve cases the past season and report same in detail, but I want to state now that when the season was over I was very much disappointed as to the results. Only one case was completely relieved, and his occupation, perhaps, explains the reason why. As Dr. Dunbar told us on a recent visit to this city that the antitoxine that was put on the market would act as a specific in those cases where hay fever was due to the pollen of rye, which is frequently the cause of hay fever in Germany and in this country, the hay fever is due to ragweed or golden rod. The patient I speak of having been cured, is a buyer of wheat and rye and examines a great deal of grain.

Almost all the hay fever cases stated that they did not have their hay fever as hard as usual, and universally declared that their eye symptoms were much lighter.

If you have read the reports from Minneapolis of Dr. Dunbar's experiments in his native city, you will have hopes that after he produces the antitoxin to fit this part of the country, where hay fever is principally due to rag weed and golden rod, you will have a valuable remedy.

THIOSINAMIN.

Two years ago I read a paper before the Academy of Ophthalmology and Laryngology on the use of this drug in chronic O. M. C., with a clinical report on fourteen cases, and today I wish to supplement that

report by two-hundred more cases with this conclusive observation that the drug acts in almost every case producing positive general symptoms, as great fatigue, often nausea and loss of appetite.

2d. That the results as to the immediate improvement of hearing and tinnitus are all slight.

3d. That changes may occur in the scar tissue or connective tissue acting as a protective rather than a pathological, and grave lesions may occur.

I mention this drug because I know that a good many men are using it indiscriminately, especially general practitioners, and three cases came to my notice with these disastrous results.

1st case: The doctor prescribed thiosinamin to a patient complaining of a terrible ringing in her ears. The patient had a compensated left heart following rheumatism. When after taking a few doses of thiosinamin sudden dilatation followed, which required about six weeks before recompensation occurred. About two months later the patient again took some thiosinamin for her ears and the same symptoms occurred with a much slower process of compensation of the heart.

2d case: A man complaining of deafness and ringing was given thiosinamin, three grains three times per day. Six months previous this man had an operation on his bladder for the removal of stone. Following the use of thiosinamin the wound reopened and a fistula persisted for a long time.

3d case: A young woman had a perforation of the eye and the iris healed into the wound. The eye was perfectly quiet for a number of years. In the other eye she had a scar in the corner, for which thiosinamin was given to clear it up. While the scar in the cornea showed improvement in clearing, the eye having a perforation, with the iris healed in, reopened, infection set in with following panophthalmitis, which required the enucleation of the eye.

The last two cases occurred in my practice. Several other cases were reported to me by gentlemen of similar conditions occurring, as, for instance, in an old tubercular

individual, and this started up following the administration of thiosinamin.

FERROTROPON.

Whenever I am called upon to prescribe an iron product in arsenic cases associated with some ear, nose and throat affection, I usually do so by giving this pleasant iron preparation, which is easy to take and shows very early results; causing none of the disagreeable symptoms of the teeth. However, it does cause constipation at times, owing to the chocolate it is mixed with.

VIOFORM.

A dusting powder where one is needed, preferable to the borax so commonly used for this purpose.

VERONAL.

A most satisfactory and positive hypnotic without seriously effecting the digestion in the least, effecting no bad after effects have I observed following the use of it.

A dose is from ten to twenty grains at bed time.

92 State street.

HIGH FORCEPS, PELVIC INLET FORCEPS, ITS INDICATIONS AND RELATIONS TO FORCEPS AND VERSION.

BY GEORGE SCHMAUCH, M. D., 100 STATE ST., CHICAGO.

Obstetrical art is without doubt one of the most conservative branches of medicine. Semmelweiss's discovery of the general causes of puerperal fever and later on applied bacteriology have exerted a most benign influence on the management of labor. The indications for each operative act became stricter, the operative procedures have changed but little. Asepsis during the last 10 years has become common property and this has increased the desire of operative interference with the physician as well as with the patient. Since then operative obstetrics has assumed a more surgical aspect.

Quite a number of years passed, before it became thoroughly understood, that a clinically prepared Cesarean section is a compar-

atively safe operation. Today this operation is relatively frequent. The young surgeon threatens not only eclampsia, but also placenta previa with Caesarean section. The objective observer is surprised by the strange results. Eclamptic women, operated by the general surgeon, nearly all recover, while the obstetrician, with selection of proper cases from a large number, is not able to save his patient. However, these surgical excesses are quite natural. For every momentarily successful operation, performed in the interest of woman and child, will always be appreciated by the patient and friends. The only objection lies in the fact that the obstetrician works for the gynecologist. The patient is proud of having recovered from the serious operation, whose bad effects show but years afterwards. It is this momentary success, which often induces the practitioner to operate too early. Our proficiency in asepsis permits us to interfere instrumentally under certain conditions only to facilitate labor.

We all agree that the forceps is an exceedingly beneficial instrument in the hands of an experienced man, but becomes at once pernicious when handled with carelessness or ignorance. Most of our textbooks do not emphasize sufficiently that the forceps is a traction—instrument devised only for the head standing on the pelvic floor.

For the beginner the conditions for application of forceps cannot be often enough repeated. They are:

1. Complete dilation of the os.
2. The membranes must be ruptured.
3. The head must have descended to the pelvic floor, or at least be situated in the pelvis.
4. Size and solidity of the foetal head must in some degree harmonize with the cephalic curve of the forceps. Hydrocephalus as well as the head of a macerated or immature foetus are not fit for the forceps.

These conditions shall be present, when forceps is applied; only exceptionally the physician may depart from them.

Concerning the indications of forceps we have to distinguish the obstetric indication, formulated by the teacher of obstetrics, by the

school, from those which general practice has taught. School medicine demands low forceps only in case of danger for mother or child. To this scientific indication practice has added another one which justly has been incorporated into the general obstetric discipline. This is delayed progress of labor during stage of expulsion, in other words, retardation of the expulsion of the head.

The idea that low forceps is an operation without danger gave rise to the doctrine, that forceps is indicated, when under the above named conditions the presenting head remains stationary for a period of two hours. This rule certainly precludes the existence of an exceptional rigidity of the external genitalia as cause of the delay. In case of an exceedingly rigid vulva an episiotomy will give relief. If abnormal sensitiveness prevents the woman from aiding the otherwise powerful uterine contractions by abnormal pressure, morphine or chloral will help more than forceps. Application of forceps never will prevent laceration of the perineum. The blades adapted to the head, augment its circumference and endanger the perineum by their sharp edges.

The primary function of the forceps is traction, it is very seldom used as a rotator. In a good forceps for common use the tips of the blades should be separated by a distance of 2 cm. We release and unlock the blades to allow the head to rotate in the forceps. Rotation by means of leverage can in reality be secured in deep transverse arrest only, where the head descends to the pelvic floor in the transverse diameter. Rotation should never be forced especially in occipito-posterior positions. Here rotation will only be successful if the head is higher up in the pelvis and not yet moulded.

The second indication for the use of forceps is very lax. It varies very much with the individual obstetrician and according to country. This indication is often used to save the doctors time rather than to spare the mother pain. Strict observance of the above mentioned conditions however will prevent serious harm to mother. Low forceps operation per se is an operation, which can be ex-

cuted, without endangering the life of mother or child.

According to the more or less extended indication frequency of forceps varies in Europe between 1. 4 and 11. 6 per cent and more. Osiander, a teacher of obstetrics in the thirties of the last century, at the University of Tübingen, Germany, reported 2,540 deliveries with 1,016 forceps, i. e. nearly 40 per cent. Spiegelberg from the clinic in Breslau reports 4,864 deliveries with 2 per cent forceps, part of which were performed for teaching purpose, hence without strict indication. Ahlfeld found it necessary to apply forceps in 2.75 per cent of 4,000 deliveries. Winkel in 3.08 per cent of 20,604 cases. As to private practice—Bockelmann, a well known obstetrician in Berlin, reported 3 years ago in the Berlin Gynecological society 335 cases of forceps in 15 years practice. Compared with Ahlfeld's statistic this would be equal to 12,400 deliveries. Merkel, Nürnberg, reports 21 per cent forceps, 940 deliveries in 10 years with 200 forceps. From this little report it is evident, that external causes compel the physician in practice to deviate from scientific indications.

v. Winkel, Munich, recently took occasion to declare the forceps, in accordance with Munchmeyer and Wahl, "the most bloody obstetrical operation." He designates forceps as an indispensable but hardly harmless instrument. v. W. refutes our second indication. He as well as some other German obstetricians recognize only the endangered life of mother or child as indication for forceps. Naturally his clinic as well as the others observing this rule, have a larger mortality of the children by forceps. v. W. has a mortality of 15.5 per cent. Dresden one of 17 per cent, whereas other hospitals, which recognize our second indication, have a far lower rate, namely: 4.7, 4.0 per cent. There is no considerable difference in the mortality of the mother. v. W. is in a way, right, when he says that his big mortality rate is but apparent. The obstetrician, who delivers every tenth parturient by forceps will certainly have a lower mortality of the children than the one who applies forceps only 3-5 times in

100 cases. v. W. wants the obstetrician to listen to the heart sounds every 10-15 minutes. Notwithstanding such an exact control of the foetal circulation v. W. has a mortality of 15.5 per cent. The condition of the child furnished the indication in 2-3 of all his cases of forceps. In consideration of this point and the better results at other clinics, one cannot help thinking that some of these children might have been saved by timely interference with forceps. It is hard to prove such an assertion by statistics. In comparing the absolute number of dead children after forceps-delivery with the total number of confinements, it will be seen that v. W. has lost 2 1-2 times as many children as Bonn and 33 per cent more than Basel. How much the results in practice and hospital differ will become evident from a comparison of Bockelmann's (Berlin) and Munchmeyer's (Dresden) statistic. B. had in 61 cases of old primiparae (over 30 years old) two dead children i. e., 3.3 per cent, whereas Munchmeyer had a mortality of 36.3 per cent in old primiparae. As statistics are influenced by so many factors, a comparison of a small number of 5,000 confinements with that of a four times larger one, as 20,000 (v. Winkel) is not very just. Personal experience and judgment are of more weight in these matters.

However no one will deny, that a child with normal heart-sounds, not impaired by prolonged labor, has more chances to live through an instrumental delivery than the one with the weak circulation. The difficulty lies in our inability to determine how much time elapses between the controllable changes in the foetal heart-sounds and the starting of premature respiration. There is doubtless an individual difference in the vitality of the various children; the encircling of the neck of the child by the umbilical cord is another factor which we are not able to estimate.

When other hospitals with a three times larger frequency of forceps-operation do not show a correspondingly lessened mortality, this is by no means a counter proof against the broader indication. Even if only a very small percentage of children is saved thereby,

without serious harm to the mother, we have gained considerably. How far an exceedingly delayed period of expulsion may harm the resisting powers of the maternal body is not within the limit of this paper. It is not necessary to be a fanatic adherent of Pinard's words: "That the child has a sacred right to live and none, neither father nor mother, nor the physician or anyone else can deprive it of these rights." At least one has to admit, that the child's rights have to be placed at equal consideration with the mother's demand for a healthy body after delivery. A careful physician will always consider both factors. Those, who regard the delayed expulsion as an indication, do not anxiously cling to the period of 2-3 hours. They wait 4 and 6 hours, when the deficiency of the powers of labor become apparent. Olshausen is perfectly right in saying "that the physician is not only duty bound, but also expected to shorten an exhausting and painful labor."

It is vastly different when the above named four conditions for application of forceps, are not present. The simple and relatively safe forceps-operation becomes a serious undertaking, when forceps is applied to the head above the pelvic floor or when the head is presented in another than occipito-anterior position. It cannot be sufficiently emphasized, that under these conditions the practitioner is not justified in using the forceps, unless direct indication, danger for mother or child calls for it. The more serious the operation is the more urgent must be the indication. Incomplete dilatation of the os can be remedied by 4-6 slight incisions with the large curved Siebold scissors. Deep incisions, as recommended by Duehrssen lead to permanent injuries and should not be employed except in case of real danger. Many a physician returning from a confinement and criticising his own work, has come to the conclusion that he would have not applied forceps, had he known before how difficult it was. He naturally was quite certain about the indication in his case, but was deceived by the geographic position of the head in the pelvis. He undertook what was to be in his opinion a low forceps operation and in reality the head

had hardly entered the mid plane of the pelvis. The determination of the situation of the head offers the greatest difficulty in the entire realm of obstetrics and only a large experience gives correct judgment in this regard. Despite this fact the most of our obstetrical textbooks are brief on this point and give only few references, which may guide in practice.

In vertex presentations the head is supposed to be situated on the pelvic floor, when on examination one can introduce one or two fingers with difficulty between the head and the pelvic floor. Palpitation through the abdominal walls reveals the curvature of the foetal neck under or in the level of the superior pelvic strait. However there are some exceptions resulting from the varying height of the pelvic canal and the size of the head.

It is no true sign that the head stands on the pelvic floor. Palpation through the abiding the pains in the vulva, opened by the fingers, or when the examining finger comes directly in contact with it. A large caput succedaneum might easily prove the same finding, while the head is lodged in the middle part of the pelvis or still higher. The head is situated in the so-called narrow pelvic plane, when there is sufficient space between head and pelvic floor to enable one to reach the il spinae. The more of the interior of the pelvis allows of palpation, the higher is the head, provided it is of normal size. Occasionally examination under anaesthesia only will reveal the exact situation of the head. False pride is in such a case out of place. A second anaesthetic followed by an easy forceps will not do as much harm to the parturient, as a thoughtless difficult operation.

According to the station of the head a distinction is made between low, median and high forceps. A uniformity of the definition of the latter one has so far not been reached by the different nations. The term "high" naturally is only a relative one. Doorland gives in his textbooks a definition of "high forceps" as an operation on the head at or above the pelvic inlet. Some Germans reserve this name for that condition in which

the largest circumference of the head has not yet passed the pelvic inlet. Williams gives the same definition. In addition to this he speaks of forceps on the floating head. Others think it justifiable to apply high forceps in those cases only in which the head merely has passed the inlet with its largest circumference. In contrast to the typical pelvic outlet forceps all these operations have lately been named atypical forceps. Every obstetrician will concede that the technique of forceps applied to the head stationed in the inlet is very different from the one after the head has passed the pelvic girdle. This operation should therefore be defined in a manner which leaves no doubt of its meaning. We would do very well in accepting the name of pelvic inlet forceps, the "forceps au détroit supérieur," Beckeneingangszange, for this operation in contrast to the pelvic outlet forceps. Forceps applied to the head situated between these two extremes, medium or mid-forceps, could then be called pelvic forceps, Beckenzange. High forceps on the freely movable head is in my opinion an error.

The question is, if a special instrument, namely the axis-traction forceps, is required for the pelvic inlet forceps. The first models of forceps as well as the Niemeyer-Hohl forceps, whose blades are solid, were designed for the head resting on the pelvic floor. The higher situated the head, the larger must be the distance between blades and lock, otherwise the operator will not be able to perform the extraction of the head. The demand for a special instrument for the high standing head may be traced back as far as to Oslander. The oldest models of axis-traction forceps as Hermann's Hubert's second model, or Poullet's were devised for the purpose of pulling the head through the pelvic inlet. We notice a general desire to have the tractive force attack the head at its greatest circumference. This is easily and we may say sufficiently accomplished by attachment of tractionrods to the fenestra of the common long forceps. Axis-traction forceps constructed for this purpose is best defined as "pelvic inlet forceps" and ought to be differentiated from the proper axis-traction forceps. The latter are

more complicated instruments and were devised to pull the head in the direction of the axis of the pelvis not only through the inlet but also through the whole pelvic canal. It need not be discussed again if it is possible at all that the center of the irregularly shaped head coincides at any time during labor with that of the *caruscurve*. The objection raised by Kliehn that the advocates of axis-traction forceps intend to improve on nature by their instruments is not without foundation. In reality we are not able to determine exactly the curved course of the pelvic axis. There is one shortcoming in axis-traction forceps and this undoubtedly exists in all proper models in that the foetal head is grasped so firmly by their compression-apparatus, that it loses its own mobility. Thus the directing influence of the walls of the pelvis and genital canal is entirely obliterated.

According to the doctrine of the Schroeder-Olshausen school the forceps should be adapted firmly to the head but at the same time forceps should permit the head to descend in such a way that its largest diameter, coincides with the correspondingly largest plane of the pelvis. This natural procedure may occasionally be assisted by readjustment of the forceps.

The principal advantage of axis-traction forceps is to be found in the direction of the tractive force, which is exerted directly on the head. Therefore the amount of force lost in the extraction of the head is reduced to a minimum and consequently a better graduation of the tractive force can be obtained. The truth of the statement of some obstetricians, that a common long forceps is sufficient to deliver the head stationed in the pelvic inlet may be conceded in many cases. Indeed, often but little force is required to press the head into the pelvis, as demonstrated by the Hofmeier-Fritsch method of manual impression of the head. However the use of axis-traction forceps enables us to gauge the degree of traction. In axis-traction the pressure of the head passing the inlet becomes distributed to the entire pelvic ring and is not exerted on the symphysis only, as in common forceps.

In a low pelvic canal a common long forceps might suffice especially if the lock of the forceps is grasped from below with the purpose of exerting a firmer traction downward. Not so in a case of considerable depth of the pelvis, when the lock disappears in the vulva and even the skilled obstetrician misjudges the degree of force to be employed. A rupture of the symphysis, which happened to myself in a case of normal pelvis and oversized child has taught me a lesson for life and since then I prefer the axis-traction forceps. Rudaux, who gives a review of 98 cases of rupture of the symphysis, comes to the conclusion that this accident has become very rare since the introduction of axis-traction forceps. Another advantage lies in the smaller degree of compression of the child's head than that produced by the common forceps. For only a small part of the tractive force acts laterally, the main portion has a downward direction, (cf Budin.) I do not demand any more of an axis-traction forceps than to enable one to pull the head through the pelvic inlet in the direction of the axis. The further directing of the head is better and easier accomplished by a good common forceps. All models respond to this demand more or less. A. R. Simpson's axis-traction forceps I know by personal experience and it has always satisfied me. In later days I used a modification, devised by Zangemeister in Olshausen's clinic, proposed before him by Matthaei and many others. The details of this instrument are described in the *Cent f. Gynékol*, 1899, page 925. It consists of two rectangular shaped steel traction rods to be hooked into the blades of the forceps, a handle and a fixation screw. This is a very simple and handy instrument, as it can be attached to the common forceps and easily might be placed in every kind of obstetrical bag. I have employed it many times and it has replaced axis-traction forceps in the most satisfactory way.

Despite the advantages of axis-traction forceps, used as pelvic inlet forceps, most of the German obstetricians still disapprove of this instrument. Menge only two years ago, called it in the Leipzig Gynecological society a murderous instrument. Ahlfeld, Spiegelberg, Olshausen call it useless in their text-

books. In their opinion the profit gained by high forceps operations is so far extremely small compared with the harm done by some practitioners.

It is not my intention to encourage the practitioner to perform pelvic inlet forceps operations. In my opinion this operation should be reserved for the specialist. He alone is able to properly determine the indication.

The conditions which have to be observed for a successful application of pelvic inlet forceps are in the first two points the same as in low forceps. We will have to employ radiating incisions of the os quite frequently, as the high standing head rarely dilates the os perfectly. The other two conditions are thus:

3. The disproportion between head and pelvic inlet must not be too great.

4. The head shall be partially fixed in the pelvic inlet. Its size shall be adapted to the size of the superior strait, in other words the head shall not float over the pelvic inlet but shall be moulded to a certain degree.

Contraindications of the pelvic inlet forceps are:

1. Generally equally contracted pelvis. In the more advanced degree of this type, the passing of the pelvic inlet, does not remove the difficulties of delivery, resulting from the diminution of all the other pelvic diameters. If only the pelvic inlet is contracted, high forceps certainly can be used successfully.

2. Pathologic presentations of the head in the pelvic inlet, as face and brow presentations, if manual correction cannot be accomplished, do as a rule with very few exceptions contraindicate high forceps.

The impression of the head into the pelvis, as recommended by Hofmeier-Fritsch, stands in direct competition with pelvic inlet forceps operation. Great force can be exerted in this way. If not performed in a very brisk manner, the danger of injury to the cervix is not considered high, although there are some cases reported. Some difficulty may be found in directing the pressure perpendicularly to the plane of the superior strait of the pelvis. However it is advisable to try external impression of the head in every case, before ap-

plying the forceps. Any considerable stretching in the lower uterine segment is a positive contraindication to this maneuver. If it succeeds in bringing the head into the pelvis, common forceps may finish the delivery. Failure does not imply that the head cannot be drawn through the pelvic brim by axis-traction forceps. Pressure from above and traction from below have a different effect. The compression of the foetal head in the elastic blades of the forceps is much less than the one caused by the palms of the hand.

I have endeavored to give some points regarding the determination of the situation of the head in the pelvis. It is much more difficult to determine if the head is standing with its largest circumference in the pelvic inlet, if it will pass or has passed it. The mobility of the head depends upon the relation of its size to that of the pelvic brim. A small head and a large pelvis on a large head and contracted pelvis may have the same effect, namely, the head remaining movable. The former occurs only in uterine inertia. Generally speaking, we might say, the head has not passed the brim of the pelvis with its largest circumference, as long as it stays movable. The very minute this event is accomplished, the mobility upwards ceases. The movable head is easily lifted from the pelvic brim, by grasping it between the two fingers in the vagina and the other hand upon the abdomen. Liquor Amnii will then escape. It is understood that care must be taken to prevent the washing down of the umbilical cord. When the extended finger is able to reach the promontory, the head is still movable in the pelvic inlet and has entered it only with a smaller segment. Every centimeter of descent renders a corresponding part of the sacrum inaccessible to the examining finger. If it is possible to reach the promontory with the bent finger only, then the head is usually fixed in the pelvic inlet. If the head and its caput succedaneum covers the anterior surface of the first sacral vertebra, the greater segment of the head has generally passed the narrow point of the inlet.

However, these findings cannot in all cases be absolutely relied on. The nature of the

promontory, if more or less projecting, as well as the size of the caput succedaneum influence the covering of the first sacral vertebra by the head in a certain degree. The situation of the head in the axis of the pelvis, if high or low, does by no means indicate whether or not the head has passed the inlet. Hence the advice to have the finger sweep from the inner surface of the symphysis around the head to the promontory and in this way estimate the segment of the head which has entered the pelvis.

In multiparas with relaxed abdominal walls one may easily compare the engaged part of the head with the one standing above the pelvic brim. The most of the pelvis in which high forceps operation is to be considered are flat. In all more advanced degrees of this variety of contracted pelvis the head presents itself to the examining finger in the so termed parieto-anterior presentation, the large fontanelle being the lowest point of the head, the point of direction. The following landmarks will facilitate matters in such cases, namely: 1. The distance of the temporal suture and the parietal eminences from the anterior pelvic girdle. 2. Comparison of the distance between sagittal suture and promontory during different phases of labor. This may well enable one to estimate accurately, whether there is progress in labor, whether the largest circumference of the head has entered the inlet or not. The practitioner in determining the descent of the head in antero-parietal presentations is the best guided by the small fontanelle. His first examination in a flat pelvis reveals the sinciput low, the large fontanelle easy to palpate, whereas the occiput stands high and the small fontanelle can hardly be felt or not at all. If second examination allows palpation of the small fontanelle, we might say with great certainty that the head has or soon will overcome the resistance of the pelvic inlet.

Another point to be determined in the examination of the high standing head, is its size. Palpation of the fontanelles, estimating their size and distance from each other, aid us in gauging the size of the head. Ahlfeld has given the advice to measure the size of

the head directly with the pelvimeter, but the results are not very reliable. However the size of the head is not the only deciding factor, whether or not the head will pass the inlet. The consistency of the bones, the width of the sutures and the compressibility of the head are of great importance also. In every case due attention must be paid to the history of previous labors.

In a multipara, who has born 1 or 2 children spontaneously, or whose children have passed the pelvic inlet at least without instrumental assistance, we might expect the same in the present labor. If version has been performed, we are not yet permitted to assume, that high forceps will be successful. To determine the above mentioned points examination must be made with four fingers and in difficult cases under anaesthesia. The proper perception and accurate estimation of all these factors shows the skilled obstetrician. The same rule applies to common and high forceps, namely: Whenever instruments have been introduced into the uterine cavity, a speedy termination of labor becomes most desirable. A previous attempt at forceps, especially if made by someone, whose aseptic technique cannot be judged with absolute certainty, should always be regarded as indication to deliver the parturient. The obstetrician must be well aware, that if he has tried forceps unsuccessfully and the child is still alive and viable, only symphysiotomy or pubiotomy will save it. The proper time for version is past, when pelvic inlet forceps comes into consideration. Since Caesarean section is *out of the question*, perforation only remains, when the parturient does not consent to either of the above operations. In some very rare cases, in which danger to the mother gives the indication for immediate delivery, and the vitality of the child is lowered, when high forceps has failed, perforation and craniotomy has to be resorted to.

The life of such a dying child cannot be considered equal to that of a vigorous baby. However, today, scientifically as well as ethically, perforation of the living child has to be rejected and is justly regarded as a lack of obstetrical skill, except in such cases where

parental permission for the child-saving operation is refused.

How shall we apply forceps to the high standing head? In order to properly insert the blades the "half hand" is to be used and special care has to be taken that none of the soft parts of the pelvis be caught in the grasp of the blades. Complete anaesthesia and the placing of the woman on a table is absolutely necessary. The modern bed is not at all useful for it is too low.

There seems to be a great diversity of opinion how the blades shall grasp the head. Hirst recommends to apply them, if possible, at the sides of the foetal head or at least obliquely. This is in my opinion equivalent to a misconception of the actual conditions at least as long as the head has not yet passed the inlet. Olshausen, Nagel, Wolff, Trauffer, advise transverse application. Budin recommends to apply axis-traction forceps transversely or obliquely. According to him the transverse application prevents a firm grasp of the head, because the blade embracing the occiput, strikes with its tip against the neck of the child and consequently does not remain in place. However, this objection does not stand the test. As stated above, pelvic inlet forceps is used chiefly in flat pelvis. In this form of contracted pelvis the foetal head enters the inlet generally with the sinciput lowest. In consequence the high standing occiput completely fills up the curvature of the blade and forceps is firmly adapted to the head. In most cases of flat pelvis the sagittal suture approaches the transverse diameter of the pelvis more than the oblique. Consequently we will have to take this hint from nature and draw the head through the pelvic girdle in this position; in other words, we will have to apply pelvic inlet forceps always transversely. I cannot understand how it is possible to produce effective traction, when axis-traction forceps is applied obliquely. Any strong traction on the blades applied this way, will dislodge them. The levers of axis-traction forceps on which the force acts are connected with a movable handle; furthermore the woman is in dorsal position. These two facts make traction in any other than

frontal direction impossible. Tractive force with any other application of the blades will partly be transformed into lateral pressure and then the blades adapted with great pains and danger to the sides of the head obliquely will be forced back into the transverse diameter of the pelvis. An attempt to rotate the head in the pelvic inlet by means of an obliquely applied forceps must be strongly rejected.

This diversity of opinions can be explained by the variations of the operation itself. If the head is standing with its greatest circumference in the pelvic ring or has passed it, then even the transversely applied forceps will grasp the head obliquely. In these cases the sagittal suture generally runs obliquely. Pelvic inlet forceps, as defined above, shall always be applied in the transverse diameter of the pelvis, here alone is sufficient room for introduction of the blades without harming the mother. The left blade after introduction must be held by an assistant. After adaptation to the head the blades are locked and the handles fixed by the screw. A slipping of the blades should not occur, if it does it should be noticed in time and one may infer, that there is greater disproportion between the head and the pelvic canal than expected. If blades of the instrument used for pelvic inlet forceps are sufficiently broad and their fenestra large, the head will in most cases be grasped firmly.

How long shall tractions be continued, what force should be exerted? The first traction should be made with the utmost care. One should always consider that the force employed acts directly and therefore is more effective. The first traction also indicates, whether the blades have a firm grip on the foetal head or not. The tractive force may be slowly increased; the single traction corresponding to each pain, may last 1-2 minutes. 6-8 tractions as a rule suffice to bring the head down into the pelvic canal. Doorland, in discussing the question of anaesthesia in forceps-operations, states that it is always necessary in high forceps, for "this operation requires traction for at least one or two hours" never required more than 6 trac-

tions and in my opinion the extension of narcosis and operation for such a long period involves great danger to mother and child. Traction ought to be exerted in a line as nearly as possible coinciding with the axis of the parturient canal, the so-called directing line of the pelvis. We therefore try to direct the traction as far downward as possible. It is neither necessary to pull backward nor to place a speculum in the vagina for its protection. According to the investigations of Naegele and Weber we assume in the erect standing woman inclination of the pelvis of about 45 degrees. In a woman placed on a table with her limbs spread and hanging down, this inclination will be increased to 90 degrees, so that the plane of the pelvic inlet becomes horizontal. As the sacrum to the extent of its first three vertebra has an almost straight course, that part of the axis of the pelvis which has to be considered in pelvic inlet forceps operations may be regarded as a straight line, running perpendicular to the plane of the pelvic inlet. Thus it becomes apparent, that we ought not to direct the traction backward, and that even in Walcher's posture we should rather pull perpendicularly downward. In flat pelvis the head is rolled into the pelvic canal by rotation around the symphysis as a fixed point. Backward traction would hinder this mechanism rather than aid it.

Whether the head is descending or not is generally noticed during tractions. One may very well say, it can be felt. Sometimes we are able to control the progress by inspection, as part of the head becomes visible in the vulva, distended by the blades of the forceps. As soon as the child's head has descended into the pelvic cavity, the axis-traction apparatus had best be removed. After a new examination has revealed the direction of the sagittal suture, the blades have to be readjusted, eventually rotated and labor is terminated in the ordinary way.

Many a practitioner will not see the use of all these details in diagnosis, but simply declare that he never performs high forceps operation, preferring podalic version. I am sorry to say, that even textbooks share this

opinion. Olshausen justly declares it a lack of judgment, to consider version and high forceps as rivals in the management of labor in contracted pelvis. Marx read a paper at the New York Obstetrical Society, "Version or forceps—which?" M. asserts "that the position of the head, entirely above the brim, freely movable or not, as the case may be, or the head engaged by its smaller segment, whether or not movable, constitutes the only true high forceps application and this is in accordance with the teachings of the entire German school." I do take the occasion here, to remonstrate against this misstatement. The question of high forceps or version does not depend upon individual experience, but only upon indication, relative size of pelvis and head and its anatomical position. G. T. Harrison objected in the discussion in perfect accordance with the leading German doctrines against the title of the paper. High forceps and version exclude each other. If the head is movable in the pelvic inlet, version is the operation, which alone meets the existing indication for delivery. Whereas, when the head is hardly movable in the pelvic inlet, when it is moulded and adapted by the uterine contractions, high forceps is the only method. Podalic version in such cases is a dangerous experiment. We read about old time obstetricians, who by their manual skill have accomplished version, when the head was fully engaged in the pelvis and even nowadays some few boast of this maneuver. This kind of operation is not a sign of obstetrical skill, but merely a blunder. The head, engaged in or passed through the inlet, can be removed from its position only by manipulations requiring a good deal of time. Hereby the life of the mother is unnecessarily jeopardized: in the first place by the overdilatation of the cervix and secondly by the possibility of infection. This naturally increases with the amount of time consumed by the maneuver.

So far we are not as yet able to keep our hands sterile for a protracted period of time. Even the use of rubber gloves, which in my own experience I have found very servicable in version, does in no way protect against the

danger of an import of vaginal germs into the uterine cavity. Both operations have their advantages. Both have their exclusive field of application. The territory of version in contracted pelvis (flat pelvis), the so-called prophylactic version, is much larger than that of high forceps. The operation per se doubtless enables us to overcome a more advanced degree of obstruction. Even the physician, who is not an adherent of a waiting policy in the management of labour in contracted pelvis, will always have enough cases left, in which high forceps operation will have a life saving effect either for mother or child. These are the cases of flat pelvis.

1. In which the physician is called after the bag of waters has ruptured.
2. In which premature labor has been induced.
3. Those where he has decided upon a waiting policy.

If called early to a case of considerable diminution of the inlet—a conjugata vera of $6\frac{1}{2}$ 8 em.—version, as the operation of choice performed at a time when the os is fully dilated and the membranes still intact, followed immediately by extraction, is in *multiparas* the procedure which has the best results for mother and child. Version, if done by a skilled hand, is an operation without danger to the mother. It saves her as well as the child the injuries of a prolonged labor. On the other hand the life of the child is hereby endangered, as the time given for moulding of the foetal skull and adaptation to the deformity of the inlet is insufficient. Quite a considerable percentage of the children borne with depressions or infractions of the cephalic bones die during the first week after birth. J. Simpson's assertion, that the aftercoming head passes the narrow inlet easier on account of its wedge-shape is today generally accepted. The method of Smellie-Veit for delivery of the aftercoming head (in some localities better known as Mauriceau's method) enables us to direct the proper engagement of the head in the pelvic inlet. Here traction acts directly on the head (floor of the mouth and neck of the child). Thus considerable power is exerted which might still be increased by outward pressure by an assistant and is best combined with Walcher's posture.

It is quite different in a primipara. The tightness and rigidity of the soft parts here usually prevent rapid work. Winter's statements, which are based on the large material of the Berlin woman's hospital show a mortality of 44 per cent of children in primiparas, delivered by version, whereas in 14 primiparas with contracted pelvis, delivered by high forceps, he only had two dead children—14 per cent. Some obstetricians, for instance, Broese in Berlin, who evades the difficulties in primiparas by deep incisions of the vagina and the perineum, succeeded in reducing this high mortality in version in 10 cases to 20 per cent. Notwithstanding these good results we have no right to depart from the four indications for version in primiparas with contracted pelvis, formulated by Winter. They are: 1. Prolapse of the umbilical cord. 2. Prolapse of the extremities, if they cannot be replaced. 3. Permanent unfavorable presentation of the head. 4. Absolute standstill of labor and the condition of the mother. The condition of the child cannot justly be regarded as an indication for version as proposed by Broese. We perfectly agree with Winter's observation, that, when a disturbance in the placental circulation indicates the delivery, those children born by version as a rule die during the performance of this operation, while those extracted by forceps, live.

The high mortality and the difficulty of the operation itself are the reasons why version should always be an exceptional procedure in primiparas. Prophylactic version should not be resorted to in these cases. Hence high forceps has a much larger field in primiparas. It is the only operation, which delivers the mother without inflicting serious injuries on the soft parts and therefore might justly be employed, when the life of the child is in danger. It is worthy of note, that men of large experience in private practice as Fleischlen and Bockelmann, discussing Broese's paper took occasion to support our views.

If some physicians report, that they have delivered by version in cases, when labor could not be terminated by high forceps, reason therefore may be found in the fact that these men did not sufficiently consider the condi-

tions for application of high forceps and simply applied the latter too early. Such results do not entitle us to infer, that high forceps and version are competing operations in treatment of contracted pelvis.

Pelvic-inlet forceps may be considered in all those cases, in which the passage of the head is obstructed or delayed.

The passing of the head is impeded: 1. By diminution of the antero-posterior diameter of the superior strait of the pelvis, as in all forms of simple flat and rachitic pelvis. The same effect is produced by an oversized or exceedingly hard foetal head in a normal pelvis. 2. By uterine inertia we sometimes observe that in multiparas, though there is no considerable disproportion between head and pelvis, the head does not descend in the pelvic canal. In these cases dilatation of the os generally is incomplete and the foetus frequently undersized, here high forceps exceeds version in safety. This is the only time when high forceps may be applied to comparatively movable head. The application of high forceps in placenta previa, as recommended by some authors, deserves strong opposition. In some very few cases of low attachment of the placenta, in which we thought rupture of the membranes sufficient to stop hemorrhage, high forceps might be of value. The engagement of the head might in those cases occasionally be delayed by the insufficiency of the pains with a severe hemorrhage as the result. If the os is sufficiently dilated, high forceps will at times save the life of the child and prevent further hemorrhage.

Uterine inertia is observed quite frequently during induced premature labor, in premature rupture of the bag of waters and spontaneous premature labor, in corrected face and brow presentations and finally in some cases, in which the foetal head enters the antero-posterior diameter of the pelvis with its longest diameter. Manual correction of these irregularities usually secures spontaneous delivery. Cessation of the pains and ensuing danger to the mother, may necessitate high forceps. It is chiefly the uterine inertia, which forces us to pelvic inlet forceps in the flat pelvis. It occurs comparatively frequently in multiparae, with pendulous abdomen

and in most of these women an abnormal inclination of the pelvis may also be noticed.

The parieto-anterior presentation of the head is no hindrance to pelvic inlet forceps-operation, it requires no correction. In parieto-posterior presentations, when the head is impacted in the inlet, perforation of the living child should never be done, before axis-traction forceps has been tried. Just as well, as spontaneous delivery occurs sometimes in this presentation, pelvic inlet forceps too might secure birth of a living child.

Statistics of high forceps operation at our command, are so far of little use in the valuation of the operation. The indications vary with the different schools. Attempts at forceps, forceps on dead and dying children are all included in these reports, necessarily influencing the mortality rate. Even a general understanding of pelvic inlet and high forceps as formulated above is wanting. Moreover the various statistics from university hospitals bring the results of different operators, of the beginner as well as the skilled obstetrician. Budin reports 63 axis-traction pelvic-inlet forceps, operations from the maternité in Paris, with a mortality of 18 children i. e. 30 per cent, 6 of these were dead before the application of the forceps. Deducting these 6 cases, the mortality rate would be reduced to 16 per cent. All mothers recovered. Eckhart, in a recent report, reviews the forceps operations done in the dispensary during 10 years in Olshausen's clinic. 140 forceps with a mortality of children amounting to 35.74 per cent. 24 high forceps in contracted pelvis gave a mortality of the children of 25 per cent. 6 dead children, 5 of them perforated, 2 of the mothers died. Winter's much better results from the same hospital have been mentioned above. Münchmeyer reported 19 cases with 21 per cent dead children and all mothers living. Toth, from Tauffer's clinic in Budapest, states 34 cases of high forceps. Mortality of the mothers 2, 9 per cent, of the children 20, 5 per cent. Attempts with consequent perforation are not included. A more recent report from this hospital tells of 23 high forceps operations, with a children's mortality of 22 per cent. These sta-

tistics include all the children, which died within 10 days after delivery. Tauffer follows the same principles and indications, which are given in this paper. Nagel (Berlin Charité) one of the first advocates of axis-traction forceps reports 28 cases of high forceps in contracted pelvis, amongst these 9 primiparae with 19 living children (perforations included). Wolff, from the same hospital, reports 69 cases of contracted pelvis and axis-traction forceps. Mortality of the children 29 per cent; one of the mothers died of sepsis. Deducting the unsuccessful attempts, Wolff's child mortality is reduced to 14 per cent.

A comparison of the results of prophylactic version and high forceps is not possible. For the latter is often undertaken as a last resort before perforation, whereas prophylactic version usually is performed before the bag of waters is ruptured, with the child in best condition. Prophylactic version is undertaken with the intention of overcoming the diminution of the pelvic inlet, and has to be regarded as a therapeutic factor in the management of contracted pelvis. Pelvic inlet forceps can not be considered as such, for it only comes into play to aid nature, after the head has been moulded by sufficient pains.

Kliehn gives the general average of child mortality after high forceps as 30, 3 per cent. After deduction of attempts followed by perforation this rate comes down to 17, 1 per cent. In my opinion child mortality ranges between 17 and 20 per cent. It is evident that the high forceps mortality is lower than that of version (general mortality of children after all versions is 44.5 per cent), in fact it ought not to exceed very largely common forceps mortality.

The various reports of high forceps operations agree as to the uniformly low maternal mortality. The researches of Walthard have furnished a positive foundation for our clinical experience in puerperal infections. We were perfectly right in regarding the unusually protracted labor with its consequences, the crushing of the tissues as a main factor in the development of infections. We nowadays know, that it is not the operation nor

the instruments, but chiefly the prolonged labor, which favors the so-called "autoinfection." It is the general teaching of the Schroeder-Olshausen school, that high forceps should not be used, except when the life of the mother is directly threatened. The weakening of the foetal heart sounds demands high forceps operation just as little as symphysiotomy or pubiotomy. Olshausen adds that danger to the child and uterine inertia may give an occasional indication for high forceps in contracted pelvis. If we take direct danger to the mother as the only indication, then the application of high forceps will be rare indeed and many operations will be mere formal attempts, preceding perforation. This reserves the operation for difficult and desperate cases only and the statistics must be according, (cf. Eckhart Berlin). For the less skillful man, it naturally is best to follow that indication. Only large experience and proper knowledge of the proportions between the head and the pelvic canal, permit as further indication the threatened foetal life, as heralded by passage of meconium by several hours combined with a sinking of the foetal heart's action. For the experienced man it is but a step farther to apply pelvic inlet forceps, if labor remains stationary for a number of hours. The observation of the above named four conditions is understood. As in common forceps operation, it is not absolutely necessary to wait until there arises direct danger to foetal or maternal life, if there is a possibility to deliver by pelvic inlet forceps, without serious harm to mother or child. Especially in the flat pelvis we note quite frequently a sudden cessation of the pains, following a prolonged period of strong pains, which have dilated the os and moulded the head. Any kind of narcotic administered, procures sleep for such an exhausted woman during some hours and many times the renewed and more effective contractions brought on after the rest, will expel the child.

But the question is, can we rely on this? Shall we expose the woman tortured for hours to another period of suffering. In my opinion, no. If the child's head can pass the obstructed inlet then there must be a possi-

bility of pulling it through by axis-traction forceps. The more contracted the pelvis, the more advanced labor must be, and the more moulded the foetal head, if we may expect to employ pelvic inlet forceps successfully. It is not possible to state an exact lower limit of contraction for pelvic inlet forceps, as little as for inducement of premature labor or prophylactic version. A conjugata vera of 7 cm. represents probably this limit.

Every experienced obstetrician knows, that even after the head has passed the inlet of the flat pelvis, the life of the child is still in the balance, particularly in cases of difficult and prolonged labor. We are anxiously watching the foetal heart sounds in such cases, the forceps is ready to deliver, if necessary. We know very well that the three or four pains, necessary to expel the child, sometimes do not appear in time. But despite our care many a child dies during this second stage of labor. It can not be disputed, that a child delivered by pelvic inlet forceps, might as well be borne spontaneously. On the other hand should the skilled obstetrician subject mother and child to all these dangers? This must be answered in the negative. When the general conditions for application of the pelvic inlet forceps are present and labor is abnormally delayed, the obstetrician has a right to terminate it. It should never be attempted without sufficient and well grounded confidence in the successful termination. Direct danger to maternal life furnishes the only exception to this rule. In those cases the mother must be delivered, without regard to the life of the child. These are diseases of the heart, kidneys, eclampsia, psychosis, tympany of the uterus, high fever combined with accelerated pulse and threatening uterine rupture. In multiparae with movable head, version is preferable under these conditions. In all cases of considerable distention of the lower uterine segment or in primiparae, pelvic inlet forceps is the proper operation, competing only with pubiotomy. Under these conditions, as well as in pathological presentations, the operation represents nothing more than a mere attempt and this should not prejudice one against the benefit of pelvic inlet forceps. Everyone will think it perfectly absurd to

try a pubiotomy in a case with absolute indication for Caesarian section. However, many obstetricians still expect wonders from axis-traction forceps. In their opinion the latter can overcome any grade of disproportion between head and pelvis.

I personally have been well satisfied with the results of pelvic inlet forceps and have gradually extended my indications. My last 10 cases, of which notes are still in my hand, have not shown any serious harm to the mother, excepting a complete tear of the perineum in a primipara, caused by the necessarily rapid development of the shoulders of the overgrown child. (This operation was done with a common forceps). Three of the women were primiparae, 8 of these cases were observed in Berlin in dispensary practice, two in Chicago. One child died at the end of the first week. It was a weak child and its death cannot be charged to the forceps. Four of the children presented deep pressure marks on the head from the pelvis. In one of them the mark measured 8 cm.

Most of the pelvis were flat, conjugata diagonalis 10-10½ cm. In two cases with small children, the intrauterine colpeurynter was used on account of uterine inertia. Some of the women had been in labor for 3-5 days, one had been deserted by her physician. Prolonged labor and insufficiency of the pains were the main indications in my cases. In one case only do I find notes of a weakening of foetal heart sounds. It is the case of the complete tear of the perineum. Meconium had passed from 6 of the children for several hours.

To summarize the indications for pelvic inlet forceps:

1. Direct danger to the mother (here an attempt only is permitted).

2. Danger to foetal life. Sinking of the foetal heart sounds, while meconium passes for hours.

3. Complete standstill of labor due to uterine inertia. In other words, when fixed head remains stationary in pelvic inlet for a number of hours because pains are not forceful enough to press the head through the inlet.

Second and third indication are only jus-

tified when the above named four conditions for high forceps are present.

Whoever adheres strictly to these conditions will discover that pelvic inlet forceps with these additional indications is a most beneficial operation. In many cases of flat pelvis he will save the life of the child. He furthermore will spare the mother a great deal of exhausting work and shorten her labor at a time most critical to her and her child.

LITERATURE.

1. Bockelmann, Zeitschr. F f, Geb. u. Gyn. Bd. 45.
2. Budin. Obstetrique 1898.
3. O. Eckhart, Zangengeburtten d. Berliner Frauenklinik. ref. Cent. Ff f. Gyn. 1904 No. 45.
4. H. Fehling, Ueber d. Anzeigen d. Zangenoper. Hegar's Beitr. Bd. 7.
5. C. H. Grandin, Axis-traction forceps, Medical Record 1901.
5. Grube, Geburtsh. Gesellsch. Hamburg. Cent. f. Gyn. 1904 No. 41.
7. Henkel, Zeitschr. f. Geb. u. Gyn. Bd. 50.
8. Kliehn, der heutige St. d. Achsenzugfrage. Monatschr. f. Geb. u. Gyn. Bd. 8.
9. Marx, American J. of Obstetr. 1903.
10. A. Mueller, Behandl. d. Geb. b. eng. Becken. Münchener med. 2 Wochenschr. 1903.
11. Mùnehmeyer, Archiv f. Gyn. Bd. 36.
12. Murray, Edinburgh med. J. 1896.
13. Nagel, Weitere Beob. u. d. Anwend. d. Achsenz. Archiv f. Gyn.
14. Rudaux, Thèse de Paris. ref. Cent. f. Gyn. 1899.
15. Schulz, Wendung u. hohe Zange, Zeitschr. f. Geb. u. Gyn. Bd. 34.
16. C. Stuhl, Berlin Doct. dissert. ref. Cent. f. Gyn. 1899.
17. Tarnier-Budin, Traité de l. art des accouch.
18. Toth, Archiv f. Gyn. u. Geb. Bd. 55.
19. Wahl, Archiv f. Gyn. Bd. 50.
20. Walthard, Bacteriol. Unters. Archiv f. Gyn. Bd. 48.

21. Th. v. Wenzel, *Hohe Zang. Cent. f. Gyn.* 1903.

22. v. Winckel, *Ueber d. Anzeigen d. Zangener. D. Deutsche Klinik* 79. Lieferung. 20. Vorles. 1903.

23. Winter, *Wendung b. Erstgeb. Zeitschr. f. Geb. Bd. 13.*

24. Br. Wolff, *Therap. d. Geb. b. eng. Beck. Archiv. f. Gyn. Bd. 69.*

25. Zangemeister, *Cent. f. Gyn.* 1899 pag. 942.

Dorland, Hirst, Williams, Olshausen, Ahlfeld, Spiegelberg textbooks of obstetrics.

PRISON TUBERCULOSIS.

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Tuberculosis is a disease that necessarily requires for its treatment plenty of fresh air with good hygiene and sanitation, part of but not all can be obtained in the ordinary prison; however, in order that tuberculosis may be stamped from our prisons it is necessary that the physician in charge carry out the most rigid hygiene and sanitation possible. To do this it will be necessary to first reconstruct the cell houses and place them in a more sanitary condition. I quote from the commissioners' report Joliet Penitentiary, 1902: "The two wings of the penitentiary contain 900 cells in which to take care of 1,200 or more prisoners. It is necessary, therefore, to put two prisoners in many of the cells, which are only 7 feet long, 7 feet high, and 4 feet wide; and we feel that we can present the matter no more forcibly than to quote from our last biennial report and say that: When one thinks of two men spending never less than 14 hours each day during six days of the week, and on the seventh day nearly twenty-one hours, in a space so reduced, and with a slop bucket in the cell for their use in responding to calls of nature which no care can prevent from being offensive and pestilential in every sense of the word, he is compelled to ask what excuse the great State of Illinois can offer for compelling the management of this penitentiary

to so deal with men who are required by law to serve sentences here, that they must eat, rest and sleep in quarters so contracted, so repellant, and so utterly unfit for the purpose, that their very existence is a disgrace to the State that permits it."

Here we only get the layman's view of it, but he cannot understand or conceive the tremendous amount of infection that accumulates under such conditions and the methods by which it travels.

In making my first inspection of the cell houses at Joliet, I found them to be of the old block stone type, the roof built flat with the cell blocks preventing any circulation of air. This was compensated for to some extent; in the winter by forcing with a large fan fresh air over steam pipes to a ventilator in each cell. In the summer by reversing the fan the foul air was withdrawn; regardless of this, at night the air was very foul and contaminated.

I at once made a protest against this condition and requested that something be done to give better ventilation; which during my service was partially accomplished by putting a new roof on the east wing, designed by the State Architect, so as to extend well up over the cell blocks, with many ventilators at the top giving a perfect circulation of air. This was completed at the latter part of my service and reduced the number reporting at sick call from this section of the prison to such an extent, that I immediately recommended to the board of commissioners that a new roof of the same construction be put on the west wing; which suggestion I again made in my biennial report. I am given to understand this was completed this year.

A dining hall was under construction during the latter part of my service which is completed and now in operation. This does away with the men eating in their cells.

These improvements should reduce the mortality at Joliet prison much lower in the future than it has ever been before.

In prisons where tuberculosis is on the increase, men are confined in such close quarters that it is but a short time until the new inmates contract the disease. Some of these prisons have no hospital facilities whatever,

either for general or tubercular cases. Usually an old building is utilized as a hospital with no idea of sanitation, as was the case in one of the prisons I visited. This building contained one large ward in which all cases, both surgical and medical, were placed, so close together that the cots almost touched each other. Most of the medical cases in this hospital (?) were tubercular. The prison physician confided to me that tuberculosis seemed to be on the increase, but there was no way of retarding it.

How could it be expected to stamp out a contagious disease under such conditions? Tubercular patients must be isolated more particularly in prison than anywhere else.

The States owe it as a duty to the non-infected members of their community, in making the sanitary conditions of their prisons the very best, in order to stamp out these hot-beds of contagion.

Convicts sentenced for only a short time enter these institutions, contract tuberculosis, serve their sentence, are discharged and roam about at large to spread the disease and die outside the prison walls.

I quote from my biennial report of the Illinois State Penitentiary, Joliet, Sept. 30, 1902: "Tuberculosis, that dreaded of all prison diseases, was reduced by my predecessor 50% and of which I have now reduced an additional 33⅓%, making the lowest death rate from this disease in the history of the institution; the death rate from all diseases has been brought down to a little over 1% and as the records show that 31% give a history of tuberculosis, either inherited* or acquired, some already advanced in the last stages, and 15% a history of syphilis, it is safe to say that the death rate is practically nil, that is, much smaller than in a community at large that is broken down, poorly fed and suffering from disease the result of debauchery, as the average criminal is on the outside."

Referring to the following table taken from my biennial report of same date, it will be seen that the deaths from tuberculosis are ½ of 1%, the remainder being caused from other diseases.

Comparative statement for fourteen years from 1888-1902:

Year ending.	Total number of deaths.	Number of deaths from tuberculosis.
Sept. 30, 1889.....	24	14
Sept. 30, 1890.....	39	22
Sept. 30, 1891.....	27	15
Sept. 30, 1892.....	40	26
Sept. 30, 1893.....	38	25
Sept. 30, 1894.....	39	25
Sept. 30, 1895.....	46	34
Sept. 30, 1896.....	37	28
Sept. 30, 1897.....	18	14
Sept. 30, 1898.....	32	21
Sept. 30, 1899.....	26	14
Sept. 30, 1900.....	19	7
Sept. 30, 1901.....	14	6
Sept. 30, 1902.....	17	9

This makes during my service a total of 31 deaths from all causes, 15 of which were due to tuberculosis.

Too much care cannot be exercised in the inspection of the cell houses, if they contain the old bucket. Some of the creolin compounds should be used, and the same said of all closets in the cells, even where they have running water. After the buckets were carried out and emptied they were well washed with a creolin compound and exposed to the air all day.

After the men left for work the cell houses were well ventilated, galleries and floors scrubbed with soap and sand and thoroughly flushed out. The bedding taken out from each cell and allowed to air. In the winter it was impossible to allow the ventilating to last long, as it would chill the stone blocks to too great an extent, but in the summer it was continued all day.

The shops were inspected every day; here cuspidors were furnished, filled with damp sawdust, emptied every day and burned.

In making this routine inspection, if I saw a man who showed signs of anaemia, he was ordered to sick call at once, where he received a thorough physical examination, and

*Prison Records call for a History of Heredity.

although there may have been no further signs of tuberculosis than this condition, there was always the suspicion that it might be the beginning of the disease; consequently he was given the benefit of the doubt and transferred to the yard at once.

The tuberculin test was never administered; however, I believe that here it would be of the greatest value, as it would make an early diagnosis and save a great many that would otherwise go on to the advanced stages undiscovered; furthermore, it would make a differential diagnosis between the soap eaters (who are a class of convicts wishing to get their work changed and have an easy "job" in the yard, eat a certain amount of soap each day until they become very anaemic and resemble in many respects the patient with the beginning anaemia of tuberculosis.

Again, it would give the diagnosis long before the tubercle bacilli could be found in the sputum, which when found in a prisoner usually means death in a short time.

At the Indiana Reformatory, Dr. H. C. Sharp, physician in charge, together with Dr. Jewett V. Reed* of the John Hopkins Hospital, have carried on a line of experiments in which they show that out of 965 men in the institution who received a physical examination, 24 were found to be definitely tubercular and were not tested with the tuberculin. The remaining suspicious cases were tested with the tuberculin, of which 102 gave a definite tubercular reaction, making a total of 102, or nearly 13%.

After ordering a man up and giving him a thorough physical examination, if he showed any roughness at the apex of the lungs or any of the other signs of tuberculosis, I immediately ordered his work changed and transferred him to the yard. Here he was kept in the air during working hours, and if there was not enough work about the yard for all I transferred there, the keeper would put them breaking stone. This may seem rather laborious work to give a tubercular patient; however, he sat down to his task in a shed in the open air and probably never broke more than a bucket full in a day.

The men transferred to the yard I gave a special ticket to the convict kitchen, where one table was reserved for them at which they received a very nourishing diet, finishing with a glass of milk.

With the exception of the outdoor air, I believe nothing better in tuberculosis than a stuffing diet. Where these men showed marked improvement (as the soap eaters would very rapidly), I transferred them back to the shop, where they would get light work.

For all the men transferred to the yard I ordered woolen underwear, both summer and winter. And here I may state that I did the same where any man was employed where the temperature was extremely hot or cold.

In the winter the men in the yard were supplied with overcoats aside from their heavy prison suits.

All tubercular patients that were not in the hospital were changed to the floor in the cell house where they had a cell by themselves.

At sick call all the tubercular patients came up with the others and received their treatment. Aside from treating any slight ailment, they were each furnished with an 8-oz. bottle of extract of malt, each dose containing from 2 to 4 gts. of beechwood creosote to a tablespoonful of malt, according to the tolerance of the patient's stomach. In many instances this dose was greatly increased. I believe that good results were oftentimes obtained from this treatment. If the cough was very severe, an anodyne cough syrup was prescribed. If I saw at sick call that a man was unable to return to the yard, he was taken into the hospital and put in the tubercular ward, which was situated on the third floor. This ward was completely isolated from the rest of the hospital and cared for by two attendants, one for day and one for night, who were never allowed to go into the other wards of the hospital, neither were any of the attendants allowed to go into the tubercular ward; and it was part of the duty of my assistant who had the care of the hospital under my supervision to see that this was carried out.

The tubercular patients' meals were cooked

*Journal American Medical Association, February 4, 1905.

down stairs with the others and sent up to the tubercular ward, where they were furnished to the patients from their own table, at which they had their own table utensils. After the meal these utensils were washed and sterilized in the tubercular kitchen and none of them allowed to leave it.

This ward was always well ventilated, the windows being open sufficiently to give a free circulation of air without causing any draught, but kept at a good temperature at about 70.

Aside from the general ward, there were three rooms where I placed patients who were in the last stages with no hope of recovery.

After a death the room was thoroughly fumigated with formaldehyde and from time to time I would order the whole ward fumigated on general principles.

Much has been said of disposing of tubercular sputum. I tried the paper cup, but believe it the dirtiest and most liable way of spreading the infection of any means I know of, as it is simply impossible to keep it sterile. Instead I had each bed furnished with a white enamel one pint cup; in this was placed a little water (bichloride could not be used, as my patients were very liable to drink it should they have any idea as to what it was). These cups were emptied often by the attendant: never allowing them to remain unemptied over twelve hours and a new cup substituted. The one containing the sputum had poured into it 4 oz. bichloride, allowed to stand for one hour, emptied, washed and sterilized.

Under the existing conditions it is impossible to give prisoners the open air treatment and the best the prison physician can do is to come as near to it as possible. This can be accomplished in part by keeping the windows open continuously in the tubercular wards of our prison hospitals, both summer and winter, furnishing the patients with clothing suitable for the season. However, this line of treatment cannot be carried out at Joliet, where nature gave a healthy atmosphere, but owing to the encroachment of the rolling mills of the Illinois Steel Company which now stand in close proximity, the air is per-

colated with gases and smoke which are daily and nightly belched forth from its mills, enveloping the whole prison. Although those in the early stages transferred to the yard improve and get well in this atmosphere, to those in the later stages in the hospital this gas and smoke acts as an irritant.

I cannot agree with Dr. Samuel Hopkins Adams, who is quoted as stating that the incarceration of consumptives, incipient or otherwise, was practically capital punishment. All prisons are not alike, as is plainly shown by my statistics at Joliet.

The average criminal on the outside lives a very irregular life with poor sanitary surroundings, and a diet consisting mostly of free lunches between "jobs" and one of debauchery after a "haul." In prison his hours are regular, with a wholesome diet, and if the sanitation of the prison in which he is confined is carried out properly, his physical condition will improve. Many convicts who upon entering are of poor general physique, after remaining for a time improve and become strong, even under the close confinement.

In prisons the most rigid discipline must be maintained and it is through this that a certain number of convicts bring tuberculosis on themselves by repeated punishment in solitary confinement.

Out of 1,200 or more convicts confined at Joliet, from 700 to 800 have never been in solitary confinement, 200 to 300 have received slight punishment. The remaining 100 to 200 of the lowest and most degraded thugs and "hold-up men" that the prison contains, so far below the average criminal that they are termed among other convicts "rats," from the fact that they never do anything but a low "job," are the class that keep the solitary busy. In the year 1901, out of a total average of 1,281 convicts, there were 37 punishments. During the year 1902, with an average of 1,273 convicts, there were 44 punishments. Although this class of convicts know what to expect by becoming refractory, continue, and by being sent into solitary confinement time and time again tuberculosis ultimately results.

If the convict who at the time knows what he is doing, breaks the rules of the prison to which he is sent, becomes refractory, and is repeatedly sent into solitary confinement until tuberculosis develops, neither the State nor the prison authorities can be held responsible for such action, and it is well for the good of society at large that this class of criminals take so scientific a method of exterminating their race.

In conclusion, I will say that the proper treatment of tuberculosis is:

First. It remains with the States to build proper sanitary cell houses.

Second. The prison physician must keep his patients in the open air as much as possible, and when in the hospital isolate them.

Third. To keep all tubercular patients clothed with flannels both winter and summer.

Fourth. Give a good, nutritious diet with plenty of milk.

Fifth. Anodynes for excessive coughing—good tonics—and I believe that good results are obtained from guaiacol carbonate, guaiacol and creosote.

STERILITY IN THE MALE.

BY ALFRED SCHALEK, M. D., CHICAGO.

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The fact that the knowledge and treatment of genito-urinary diseases have rapidly progressed during recent times, justifies the hope that the matter under consideration may profit, if more attention is paid to it. Sterility in the male means inability to successfully impregnate the female ovum. Impotentia coeundi is due to an imperfect erection of the penis. Impotentia generandi or sterility, with which this paper deals, is a broader term, implying more than incapacity of copulation only. It is frequently found in men, vigorous in intercourse, and with an emission of an apparently healthy seminal fluid. The causes which prevent the ejaculation of fertile semen into the vagina are many. We will consider for a moment the

physiological action of the seminal secretion. The spermatozoa are formed in the testicles, whence they pass through the vasa deferentia into the vesiculæ seminales. There they are stored away until the time of ejaculation. At this time the contraction of the smooth muscular fibres of the ampullæ, supplemented by the contraction of the accelerator urinæ, forces them into the urethra. During their passage through the urethra they become mixed with the secretions of the prostate, the Cowper's and the urethral glands. At the same time the verumontanum swells up and prevents the back flow into the bladder. It can easily be seen how the interference with any of these acts must result in failure of the semen, to reach the vagina, and ultimately in sterility.

Assuming first the power of erection and emission to be normal, alterations of the seminal fluid may frequently be the source of its inefficiency. We will now consider the absence of spermatozoa, the Azoospermia. This is often overlooked in the man and as Fuerbringer remarks, frequently makes the innocent woman a victim of all kinds of operations before the microscope establishes the real facts. It is self-understood that no spermatozoa are formed in congenital absence of both organs—anorchism—nor after bilateral operative removal of these organs—castration. The same applies to the absence or deficiency of the excretory apparatus or parts of it. Retention of the testicles in the inguinal canals will prevent their development or cause their atrophy and will finally incapacitate them to fulfill their function. Diseases of the testicles, which produce pathological changes in the tissues, so as to impede the formation of a normal secretion or obstruct their elimination, are frequent causes of azoospermia. Syphilitic orchitis if not treated early and sufficiently, tuberculosis if advanced, and bilateral, new growth, may be mentioned in this connection. The entire testicle need not be affected, localized foci may form sufficient obstacles, to prevent the escape of the spermatozoa. Next to the testicles, the obstructions may be found in the epididymis, the vasa deferentia, the seminal vesicles, and the ejaculatory ducts. Most

common and therefore clinically most important, is the gonorrheal epididymitis. It leaves usually a nodular induration in the globus minor of a fibrino-cicatricial nature which obstructs excretion permanently. The predilection for this place is due to the fact that the inflammatory process remains longest in this dependent part. Belfield's recent proposition to drain and flush the vasa deferentia and the seminal vesicles in purulent conditions, suggested to me that by the same means these frequent consequences might be prevented. At the present time we are satisfied to treat acute epididymitis symptomatically only—that is, we relieve inflammation, swelling, and pain, but we forget that in this way we give the suppurative process the necessary time to produce a permanent obliteration. While gonorrhœa is found most frequently in these parts, syphilitic and tubercular lesions are by no means uncommon. In all these conditions the ejaculated fluid is devoid of spermatozoa. But the change in the seminal fluid from the normal need not be found as azoospermia only. In the absence of all the above mentioned pathological conditions in the spermatogenic organs, normal spermatozoa may be formed, only to meet during their elimination with a new interference. Chronic purulent affections of the seminal vesicles and the prostate gland frequently destroy them in their entirety. The microscopical picture shows them, decreased in number, and lifeless in the field. In the last mentioned case early diagnosis and efficient treatment will often completely restore proper function. The treatment of azoospermia otherwise is unsatisfactory. Aspermia, which has been alluded to several times in the remarks above, is due to an impediment in the normal expulsion of the seminal fluid. Copulation is not terminated successfully when ejaculation takes place. Conditions which prevent its deposition into the female generative organs will prevent the ultimate aim of fertilization and cause sterility. They may be organic or purely functional; they may disappear or remain permanently. Congenital absence or abnormalities and acquired obstructions of the ejaculatory ducts

have been mentioned already; considerably more important from the clinical point of view are the sequels of chronic gonorrhœal inflammations of the prostate gland and the urethra. Chronic infiltrations or sclerotic changes in the prostatic urethra may close up entirely the ejaculatory ducts; or their openings may be displaced, so as to point backwards, in which case the seminal fluid is forced back into the bladder. Hard concretions may form in the ducts or their openings, composed of phosphates and carbonates of lime, containing a nucleus of dead spermatozoa. Reflex contractions of the neck of the bladder, tenesmus, and pain during intercourse—the so-called spermatic colic—are sometimes diagnostic features of this condition. Strictures of gonorrhœal or traumatic origin may render the urethral canal impermeable for the semen; they may still permit the passage of urine, while the penis is in flaccid condition, but during erection the lumen becomes so narrowed as to prevent seminal passage. Finally a very tight phimosis which does not give way even during erection may form an efficient barrier. Functional aspermia is due to disturbances of the central nervous system; the patients are highly nervous as a rule. In such rare cases, erections take place without emission. It may be due to an atonic condition of the muscles of the genital tract, with loss of contractility, or to anæsthesia of the genital cutaneous covering as found in some spinal diseases and in others like leprosy. Malemission, which means expulsion of the semen in a wrong direction, is another cause of sterility. Some conditions which may cause it have been mentioned before; others are hypospadias and epispadias of high degrees, especially the first. The peno-serotal variety produces such effects most frequently. From this description of the causes of sterility it will be seen that the prognosis will depend on their nature. If functional only, or due to pathological conditions, not followed by destruction and permanent obstruction of tissues, the prospects of recovery are favorable. Prophylaxis should play an important role in the prevention of sterility.

A REPORT OF TWO CASES OF COMPLETE PERINEAL PROSTATECTOMY BY YOUNG'S TECHNIQUE.

BY JACOB FRANK, M. D., CHICAGO.

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Case 1. C. B., age 70, consulted me May 15, 1904, and gave the following history:

Fourteen months ago he began to complain of dysuria, voiding small quantities frequently and had to resort to the occasional use of the catheter the first nine months and catheter life for the remaining five months. He complained of insomnia, anorexia and great loss in weight.

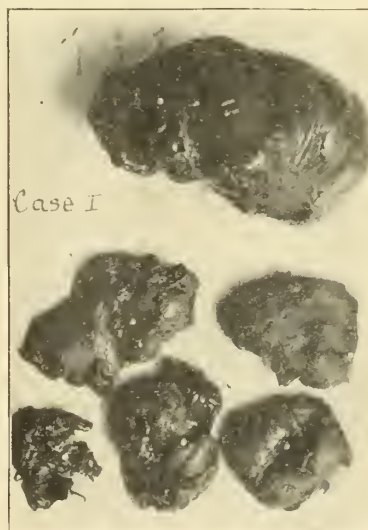
Examination per rectum determined a large prostate which could also be felt above the pubis. It was not very tender and slightly movable. The patient was told to urinate, and after passing a small quantity, he was catheterized and eight ounces of residual urine was withdrawn.

He was sent to the hospital May 29th, for further observation. Urinalysis: Quantity, 24 hours, 58 ounces; turbid reaction acid; specific gravity 1023; no sugar; abundance of pus cells; some squamous epithelium; no blood: urea 2.1; albumen present; probably due to the pressure of pus.

The bladder was catheterized daily with the prostatic catheter as the soft rubber one could not be introduced, and was irrigated with boric acid solution at a temperature of 110° F; normal salt solution twice daily per rectum.

The operation was performed June 2, 1904, under chloroform anaesthesia. Young's technique was followed. The patient was put in the exaggerated lithotomy position; a grooved sound as a guide for urethrotomy was introduced into the bladder; an inverted V-shaped incision was made, the apex of which was just over the posterior bulb, and the two arms, each about five centimeters long, midway between the anus and ischial tuberosities. After exposing the superficial muscles by blunt dissection, the central tendon was caught by a clamp near the bulb and divided; this freed the sphincter and levator ani from their anterior attachments, and exposed the rectum, drawn forward by

the recto-urethralis muscle. This muscle was then divided and the membranous urethra brought into view. This latter step not only exposed the membranous urethra, but prevented injuring the rectum. After exposing the membranous urethra, the muscles were retracted and the apex of the prostate brought into view. The membranous urethra was opened on the previously introduced grooved sound, and the edges retracted with trans-fixed silk sutures which serves as retractors. A 30 French sound was then introduced through the urethral incision into the bladder, and the sphincter dilated with an easy to and fro motion of the sound. The prostatic tractor, closed, was then carried into the bladder, while the edges of the urethral



wound were laid apart by the silk. As soon as the beak of the tractor was free in the bladder, the thumb-screw, which fixes the blades in position, was loosened, the blades rotated 180° by means of the external blades, and fixed by tightening the thumb-screw. The instrument was then handed over to an assistant, who made enough traction on the instrument to bring the gland clearly into the field. By lateral retractors and the traction produced by Young's tractor, the entire posterior surface of the gland was exposed. The capsule was now incised to a depth of 1 cm. on each side of the median line for almost the entire length of the posterior surface of the gland the two lines

being convergent, the widest part measuring 1.8 cm. the narrowest 1.5 cm. The bridge of tissue contains the ejaculatory duct, and hence in some of Young's patients potency was not impaired. By means of blunt dissection, and with the aid of Young's forceps, the right and median prostatic lobe were enucleated piecemeal. (Fig. 1.) The left lobe was nucleated *in toto*, measuring five by eight centimeters (Fig. 1.) The tractors were then withdrawn, and a double drainage tube introduced into the bladder through the opening in the membranous urethra, the inlet tube being about one-third the size of the outlet tube. This double tube was fastened with a suture to the upper angle of the perineal wound. The lateral cavities left by the enucleated prostatic lobes were packed with plain gauze, and the drainage tube connected with a siphonage arrangement, and continuous irrigation with normal salt solution, 110° to 120° F., thus kept up, the flow being regulated by means of a screw-clamp in the inlet tube. The irrigation was commenced on the table to prevent blood clots forming within the bladder.

On the second day after the operation the patient developed an orchitis on the left side, very likely due to the extreme force used by the assistant in making the traction. The swelling was successfully treated with ice-bags, and elevation of the scrotum. The rectal temperature for the first week ranged between 100° and 103° F.; pulse between 78 and 98. The temperature was due very likely to orchitis, and also to the warmth of the irrigation fluid flowing so near the rectum. No shock; pain for the first few days was relieved with one-quarter of a grain of morphia administered hypodermically. Two hypodermic injections in all were used. On the second day the gauze packing was loosened, and some of it withdrawn every day until all of the original packing was removed, and the superficial wound kept open thereafter with a small gauze pack. On the fourth day, the patient sat up in bed with the aid of a back-rest. At the end of the week the continuous irrigation was stopped, and the drainage tube withdrawn. On the ninth day a 28 French sound was introduced through the urethra into the bladder, when a soft rubber catheter was carried into

the bladder through the meatus, fastened, and the bladder irrigated twice daily with boric solution through this catheter. Five days later the catheter was withdrawn, no urine yet coming through the meatus, as the perineal opening was still too large. On the nineteenth day the patient voided some urine through the meatus, but most of it being passed through the perineal opening. From this time on the patient passed more urine daily through the natural channel, and at the end of the fourth week most of the urine passed through the natural opening at intervals of every two hours. With a 30 French bougie his urethra was sounded every other day, and irrigated once every day after the second week. In five weeks after the operation, patient left the hospital with a very minute perineal fistula, which was dressed daily. At the end of the sixth week all was healed, patient urinating every three to four hours. The urine was quite clear, and there is no residual urine. He enjoys very good health, eats and sleeps well, and has gained considerably in weight. He was impotent before the operation, and is so now.

Case II. C. D., aged 62. Family history, negative. Personal history: He had always enjoyed good health, and was working hard at his trade as a machinist. Present trouble dates back since September, 1903. Painful urination; could not empty bladder entirely; urinated twice or oftener during the night. In March, 1904, he had to be catheterized once. For the past three months prior to his appearance at my office, he had to urinate every hour, and very often every half hour; the same nights, passing only a little urine at a time, due evidently to a great deal of urine remaining in the bladder, passing only the overflow each time. When he consulted me at my office, his condition was this: He appeared pretty well run down; complained of a great deal of pain in the region of the bladder and in the lower part of his back. He felt better sitting up than lying down; he could not sleep at night on account of the pain and the frequent micturition.

Examination. The patient showed quite a loss of subcutaneous fat, although he had never been fleshy. His color was fair. Heart and lungs negative. Arteries sclerotic. Had

varicose veins, and right inguinal hernia. Lower part of abdomen tender and rigid. Bladder when distended with urine extends three and one-half inches above symphysis: voids only from one to two ounces of urine at a time. No sound or catheter could be introduced. Examination of prostate per rectum revealed a very large, hard and tender mass which seemed fixed; the lobes could not be defined.

Examination of urine: Fifty ounces in twenty-four hours; reaction acid; no albumin; small number of pus cells; urea 1.8 per cent. He entered the hospital October 29, 1904. He was put to bed and allowed a liberal liquid diet consisting mainly of milk. Urotropin, 5 grs. every four hours was administered, normal salt solution per rectum twice a day. Bowels thoroughly emptied.

Operation performed November 1, 1904, under chloroform anaesthesia. Young's technique was followed as in case I.

In this case, the removal of the prostate was much more difficult, as it was very dense and adherent to the capsule and surroundings. The individual lobes could not be recognized. The gland was found to my great surprise very much smaller than I discovered upon rectal examination: it had to be removed piecemeal with a knife and tissue forceps. No staff could be introduced into the bladder. I tried a 16 F. sound which had a smaller curve than the staff, but only succeeded in introducing it up to the point where the urethra was strictured. The urethrotomy was made below the point of the sound. The wound was packed with iodoform gauze and a double tube for continuous drainage introduced into the opening of the membranous urethra. On the fourth day the patient developed a slight orchitis on the left side, which was successfully treated by elevation of the scrotum, and the application of an ice bag. On the third day the packing was gradually loosened. The continuous irrigation was stopped on the fourth day; the tube was removed on the sixth day. A 26 F. sound passed easily into the bladder. The bladder was irrigated twice daily with boric solution and by the end of the fifth week every third day. The packing was removed on the tenth day and the patient first urinated through the meatus November 29th.

December 25th, patient developed right-sided sciatica, which disappeared in a few days under treatment. He sat up in bed with the aid of a back-rest on the third day and was able to walk around in three weeks. Perineal opening completely closed December 14th. Patient was impotent before operation and is so now. The stream is very good, and no residual urine which is very clear.

The fibrous condition of the prostate of this case can be seen on the slide under the microscope.

100 State street.

DIFFERENTIAL BLOOD COUNT, TECHNIC AND CLINICAL VALUE IN SEPTIC CASES.*

BY CHARLES HILL, PH. D., M. D., CHICAGO.

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Spreading Blood for Staining. There are three standard methods employed in making a spread:

1st. Place a drop of fresh blood between two cover glasses. Slide one over the other so as to leave a thin film of blood on each cover.

2d. Place a drop of fresh blood on a glass slide. With the edge of a second slide spread the blood evenly by drawing the second slide, with a steady motion, over the free surface. The blood film should cover two-thirds of the first slide. (See Fig. 1.)

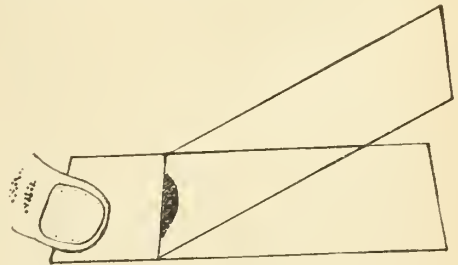


FIG. 1.

3d. Saturate the end of a thin filter paper, or cigarette paper, with fresh blood. Draw this over the surface of a glass slide much as in the preceding case.

The covers and slides must be perfectly clean, particularly free from any oily ma-

terial, otherwise the blood will not spread evenly. The second method is perhaps most satisfactory. The third method is a very good one, but requires a little more blood.

Fixing. The classical method is to immerse the covers, or slides in equal parts of absolute alcohol and ether. Fix in this solution for one to twenty-four hours. The spread should be allowed to dry in air before placed in the fixing solution.

Staining. After fixing, dip the preparation in water and treat as follows:

1. Haematoxylin, or methylene blue, or any nuclear stain, 5 to 10 minutes.
2. Tap water.
3. Eosin, 1 per cent solution, 3 minutes.
4. Water.
5. Dry in air.
6. Dry in fingers, over flame.
7. Mount in balsam and cover.

A few drops of the stains are placed directly upon the blood spread, while the whole slide may be immersed or rinsed in water.

COMMENTS.

In suspected infectious cases, such as appendicitis, where differential count is very urgent, the above method requires too long a time. Most accurate counts can be made from slides prepared in the following manner:

1. Secure a thin spread on glass slide.
2. Dry in air.
3. Heat gently over flame. This fixes the film to the slide so that the stain or water will not wash it away.
4. Haematoxylin, or methylene blue, or Loeffler's blue, 3 to 5 minutes.
5. Remove stain with water.

A differential count of white corpuscles may now be made without drying or covering the specimen with a cover glass. If the examiner is familiar with normal blood he can quickly tell, by the abundance of white corpuscles, if a leucocytosis is present. It is easy to become familiar with normal conditions if doctors will examine their own blood

and make a few permanent specimens for comparison.

The differential count is recorded just as we tally votes. The doctor finds a desirable field with the two-thirds objective, where the spread is even and 10 to 40 white corpuscles can be seen. The one sixth objective is focused upon this area and he proceeds to count. A second person tallies. Any one can do the latter. In this way the doctor does not have to remove his eye from the microscope. The glass slide is moved upon the microscope stage and the count continued until a total of 100 white corpuscles are counted and the percentage of the different forms is ascertained. The following is a record of such a count where there was a leucocytosis of 23,000 white corpuscles to the cubic millimeter.

Polynucleated cells	86%
Mononucleated small	8%
Mononucleated large	6%
	<hr/>
	100

This count may be repeated several times and the general average taken. It will be observed that the method of counting is exactly the method used in recording votes in an ordinary ballot election. With a little practice the preparation and count can easily be made in 20 minutes, while an expert will do it in half that time. Later, at his leisure, the doctor can prepare and mount the specimen in balsam, thus making it a permanent record.

In the above method no attention is paid to the red corpuscles, but in suspected infection the red corpuscles contribute no information, and with busy doctors and in urgent cases we are often after practical results obtained as quickly as possible. In this case too the eosinophils will be counted with the polynucleated cells, but as the eosinophils constitute but one to three per cent of the white cells, their presence does not modify the practical value of the results obtained.

After making a large number of differential counts in septic cases and also in each case a total count with the Thoma-Zeiss

blood counter the following tabulated results have been obtained:

Normal blood, white cells per cu. mm.

7,000 to 10,000, polynucleated 60-70%
Leucocytosis, white cells per cu. mm.

14,000 to 20,000, polynucleated 80-85%
20,000 to 30,000, " 85-90%
30,000 to 40,000, " 90-95%
40,000 to 50,000, " 95 + %

The above computation and relation is subject to considerable variation in individual cases. If the differential count shows an increase of the polynucleated cells to 85% the case is critical and as a rule justifies surgical interference. The danger increases with the higher percentages.

If the leucocytosis in sepsis, is due to an increase of the polynucleated cells while the mononucleated cells remain a constant factor, as is maintained by various investigators, the above table may be derived deductively. Assuming the total number of mononucleated cells in normal blood is 3,000 to the cu. mm. (30%) and that this total number remains constant in septic cases the following table is deduced:

Leucocytosis per cu. mm.	Mononucleated white corpuscles per cu. mm.	Polynucleated white corpuscles per cu. mm.	Percentage of polynucleated.
10,000	3,000	7,000	70 %
15,000	3,000	12,000	80 %
20,000	3,000	17,000	85 %
30,000	3,000	27,000	90 %
40,000	3,000	37,000	92½ %

A differential count in septic cases is equal if not of higher diagnostic value than a count with the Thoma-Zeiss blood counter. The use of the latter requires considerable skill and consumes so much time that the average busy physician does not use it. The differential count, however, is so easy, so quickly made, so reliable that it should be resorted to in all cases of doubtful septic infection. A little private practice in technic will render any physician efficient in securing reliable data that may be of greatest value in clearing up a doubtful case.

For the benefit of any one who may be interested in the general subject of haematology the following abbreviated list of literature is appended:

Cabot on Examination of the Blood.

CULLEN, E. K., a morphological study of the blood of certain fishes and birds, with special reference to the leucocytes of birds. *Johns Hop. Hosp. Bull.*, 1903, XIV, 352.

DEHLER, A., Beitrag zur Kenntnis des feineren Bau der roten Blutkörperchen beim Hühnerembryo. *Arch. f. mik. Anat.*, 1895, XLVI, 414.

EWING, J., Clinical pathology of the blood. *Phil. and New York*, 1903.

GOLDHORN, L. B., The staining of mast cells and remarks on percentages of mast cells in the human blood. *Y. Y. Uni. Bul. Med. Sc.*, 1902, II, 69.

GULLAND, G. L., On the granular leucocytes. *J. Physiol.*, 1895-96, XIX, 385.

JOLLY, M. J., Recherches sur la division indirect des cellules lymphatiques granuleuses de la moelle des os. *Arch. d' anat. mic.*, 1900, III, 168.

KOROBOW, N. S., Contribution a l'étude de l'hematopoïèse. *Arch. de Soc. biol. St. Pétersb.*, 1899, VII, 387.

MINOT, C. S., Zur Morphologie der Blutkörperchen. *Anat. Anz.*, 1890, V, 601.

MUIR, R., Contributions to the physiology and pathology of the blood. *J. Anat. and Physiol.*, 1891, XXV, 256, 352, 475.

BRONCHOSCOPY FOR THE REMOVAL OF A COLLAR BUTTON FROM THE LUNG.

BY E. FLETCHER INGALS, M. D.

Reported to the Chicago Laryngological and Otological Society March 7, 1905.

On May 23, 1904, Mr. C. D. H. was sent to me by Dr. F. W. Wilcox of Minonk, Ill. He was a man 22 years of age who had formerly weighed 142 pounds but at the time he visited me he only weighed 107½. He told me that 14 months previously he had accidentally drawn a collar button presumably of vegetable ivory into the air passages. He at once felt the sensations caused by it near the upper part of the sternum on a level with the second rib; subsequently he had some

soreness in the same place. He expectorated a little blood a few minutes after the accident and he said that there quickly appeared a peculiar squeak in the breath sounds. Pneumonia developed upon the left side within 24 hours and lasted for one month. He had coughed ever since. He had sometimes felt something moving up and down in the lower portion of the trachea and a valve-like action with choking for a few seconds. The father stated afterward that the patient frequently had these choking attacks coming on without apparent cause and without cough. The last time this sensation had been noticed was four months before he came to see me. He said he had been coughing continuously ever since mostly at night. This was probably due to a change in position of the foreign body. During the summer immediately following the accident, he had had an aggravation of his symptoms with daily fever in the afternoon, during which time he had been kept in bed for a week or two. His recovery from that attack had been very slow. When I first saw him he complained of occasional pain in the left side referred to the second interspace about an inch to the left of the sternum, and occupying an area about two inches in diameter. He had felt no pain in any other portion of the chest excepting low down on the left side at the time he had the attack of pneumonia. His previous history was negative. The heredity was good, there being no tuberculosis upon either side of the family. He was one of twins and reported that his brother was strong and well. He had been much weakened by his prolonged illness, was pale and very anaemic, had dyspnoea upon any exertion, and had some swelling of the feet. The voice was clear. I found the pulse 120, the temperature 99.6. He complained of coughing a good deal, mostly at night, and said that he raised occasionally a thin sputum of a brick dust color, but there were only from two to four drachms daily. There had occasionally been faint traces of blood in the sputum but no distinct signs since immediately after the accident. His appetite was good, but digestion only fair; bowels loose, urine normal. There were no abnormal signs in the nares but the

larynx and trachea were moderately congested. We found the haemoglobin only 65%. The sputum contained many pneumococci and pus cells, but no tubercle bacilli. Upon examination of the chest, I found very little movement, with retraction of the left side. The right side an inch below the nipple measured $15\frac{1}{4}$ to $15\frac{1}{2}$ inches, the left from $14\frac{1}{2}$ to $14\frac{3}{4}$ inches, but there was no change in the line of dullness on changing the patient's position. The patient said he had been aspirated twice about eight months ago, but no fluid had been found. There was dullness on the left side above the second rib excepting a small area between the first and second and flatness below that level all over the lung. The resonance and respiratory murmur were exaggerated over the right side. The apex of the heart was found in the fourth interspace one-half an inch to the left of the mamillary line. Upon the left side there was broncho-vesicular respiration in the supra clavicular region. From the clavicle to the third rib, the breath sounds were very indistinct, below this they could not be heard at all. The voice sounds were exaggerated above the left clavicle and they were quite distinct as low as the second interspace; but they were somewhat feebler over the remainder of the left lung than over the right side. The vocal fremitus was absent below the third rib. The heart's action was rapid and regular and the sounds were normal. Posteriorly there was marked dullness at the left apex extending an inch and a half below the spine of the scapula with absolute flatness below this line. The resonance and respiratory sounds were exaggerated upon the right side. There was broncho-vesicular breathing at the apex of the left lung, though not very intense. On forcible respiration very often breath sounds could be heard as low as the lower border of the left lung.

Fluoroscopic examination showed a dense shadow all over the left side excepting a small area in the infra clavicular region, where the shadow was less marked.

I sent the patient to the Presbyterian Hospital and had a skiagraph made but nothing could be seen, the lung being so dense that

even the ribs did not cast a shadow near the root of the lungs. Three other negatives were taken with similar results. At 5 o'clock in the afternoon of May 23, assisted by several of the internes, I gave the patient chloroform and by upper bronchoscopy attempted to remove the button. Although I had previously given the patient 1-60th of a grain of atropine, there was still abundant secretion in the trachea and a large amount of expectoration. Indeed, he coughed practically all of the time during the operation, which lasted from the time the chloroform was started until I desisted, in all about two hours. During this time he spat up large quantities of bloody pus, which was only kept out of my eyes by placing a pane of glass between my face and the bronchoscope. The pus rendered it very difficult to see and compelled me to swab out the passages almost continuously. After swabbing out the pus I could only get two or three seconds before he would cough again. This seemed to result from the passage of the bronchoscope into an abscess. The patient took the chloroform so badly that we were not able to keep him profoundly under it and I frequently touched the bronchial tubes and the walls of the abscess cavity with a solution of cocaine, but the amount of pus was so great that it had little effect. In the examination of the left lung I was unable to see the numerous branches of the bronchi that are usually apparent, though I followed one of the branches far down until the bronchoscope was introduced its full length, 33 c.m. below the incisor teeth. I searched carefully by inspection, and palpation with a small hooklet, but was unable to locate the foreign body. There was considerable granulation tissue about the bifurcation of the trachea that for some time interfered seriously with the inspection and one mass presented the appearance of a small polypus which nearly filled the bronchoscope. I had not yet been told of the peculiar choking spells and therefore did not have in mind anything of a polypoid nature in that region. The mass that I saw I did not dare to remove, fearing that it might be connected with the bronchus in such a way that

I would open through the tube and cause a pneumo-thorax. During the operation a part of the time I used for removing the pus a strip of one-inch gauze which was crowded down the bronchoscope with a large wire, the end of which had been flattened and forked, like that used in the ordinary uterine packer. This worked fairly well, but much of the time I used cotton swabs attached very securely to long brass carriers. At one time in swabbing out the pus the sliding ring for fastening the cotton in the carrier, caught on the end of the bronchoscope and I had a little difficulty in disengaging it. As the swab was withdrawn I examined it and found the swab of cotton intact but it seemed to me a little smaller than the others: however, I concluded that this was due simply to its having become saturated with pus. Some time later I discovered at the end of the bronchoscope a white mass which looked like a large swab of cotton. I grasped this with the forcep and withdrew it, thinking that it must be a pledget of cotton that had been lost off at the time the instrument caught. Not wishing to direct attention to the interne who had been fastening the cotton on the carriers, who by the way was one of the best men in the hospital, I simply called his attention to it by a look and threw it aside without examining it. This mass appeared fully twice as large any of the pledgets of cotton after they had been saturated with the pus, and considering the subsequent history, I am now confident that it consisted of the collar button surrounded with necrosed lung tissue. During the operation the patient's pulse varied from 110 to 150 but all the time was fairly full and regular. Immediately afterward he appeared to be doing well. The next day there was no temperature and the patient said he felt fine. Two days later, he was discharged and went to his home in the country. Two weeks later I received a report that he was improving very rapidly, did not cough excepting a few times in the morning, had a ravenous appetite and had gained 11 pounds. A month later another report stated that he was feeling fine and had gained 22 pounds. Two weeks later

the patient came to see me so changed in appearance that I did not know him. He coughed very little indeed, had no pain, no dyspnoea on exertion, had a ravenous appetite and weighed 130 pounds. An examination of the left chest showed only slight dullness from the second to the sixth rib, showing that the lung had cleared up greatly from the third rib to the sixth; flatness below the sixth rib, otherwise in front and laterally signs over the chest much as at the first examination, excepting that the apex of the heart was found about $1\frac{1}{4}$ inches to the left of the mammary line. Posteriorly the respiratory sounds were good over the left lung as low as the eighth rib, but feeble or absent below that level. The fluroscope still showed a shadow over the left lung but much less dense than formerly.

In response to a letter the patient called upon me a few days ago (February 20). He said that he had been working 12 hours a day since September, had no cough, no temperature, felt fine, and weighed 136 pounds. Examination of the chest showed very slight diminution of resonance over the left side as low as the sixth rib in front and laterally, and as low as the eighth posteriorly, with a vesicular murmur in the same region about two-thirds as intense as upon the right side. The lung was somewhat contracted and the heart drawn $1\frac{1}{2}$ to 2 inches to the left of its normal position. No respiratory sounds could be heard below the eighth rib posteriorly, probably due to drawing upward of the lung and diaphragm. The normal superficial area of cardiac dullness had disappeared over the right half of the lower part of the sternum on account of the increased activity of the right lung and the dislocation of the heart to the left caused by retraction of the left lung. The patient felt perfectly well and considering the history I feel justified in reporting the operation as a complete success, although I did not at the time examine critically the mass that seemed to have been causing the trouble.

34 Washington Street.

COLLES'S FRACTURE.*

BY E. A. EDLEN, A. B., B. S., M. D., MOLINE, ILL.

The most frequent accident to which the upper extremities of the body are liable is

the fracture of the lower end of the radius. The lesion is generally not as simple as it, usually, is described in the text-books on surgery.

The correct idea of its pathology is of utmost importance to satisfactory treatment.

In the typical Colles's fracture, with the classical "Silverfork" deformity, we have a solution of continuity of the lower end of the radius with displacement backward of the distal fragment upon the lower end of the proximal fragment. The initial force is often sufficient to drive the dorsal wall of the upper into the cancellated structure of the lower fragment, producing an impacted fracture.

It is evident from the features of the deformity that the injury is not only a fracture of the radius, but also a dislocation of the lower end of the ulna, and sometimes fracture of its styloid process.

The general disturbance of the various tissues at the seat of the fracture and at the wrist joint is of great importance and should be always kept in mind.

The deep fascia passing down the forearm and over the wrist forms the annular ligament which surrounds the tendons passing to the hand and fingers. Into those sheaths, formed by the annular ligament, will be an exudation of lymph which tend to interfere with the action of the tendons and, if not overcome, will result in stiffness of the wrist joint and fingers.

The styloid process of the dislocated ulna is sometimes hooked into fibers of this ligament. Intimately connected to this ligament are the two lateral ligaments, the internal and the external. The external secures the styloid process of the radius and the scaphoid together and is prolonged to the annular ligament. The internal passes from the styloid process of the ulna in two fasciculi to the euneiform and the pisiform bone and the annular ligament. This ligament is often torn in Colle's fracture.

The exterior carpi ulnaris, passing through the annular ligament between the head of the ulna and its styloid process, fre-

*Read before the Moline City Hospital staff December 6, 1904.

quently becomes dislocated and favors an entanglement of the styloid process of the ulna in the annular ligament.

Anteriorly, protecting the wrist joint, we have the broad membranous band consisting of three fasciculi, attached above to anterior margin of the lower end of the radius, its styloid process and the ulna, below to the palmar surface of the scaphoid, and cuneiform bones. This strong ligament is more or less torn or injured. The posterior ligament secures the lower end of the radius to the bones just enumerated.

It will be remembered that the ulna does not articulate directly with the carpus. Between them is placed the triangular fibrocartilage. This cartilage is sometimes torn from its place, or is otherwise more or less injured. The proximity of the fracture to the wrist joint, with its extension synovial membrane, favors great exudation about the seat of the injury.

Furthermore, we have to take into consideration the liability of disturbance of the lower radio-ulnar articulation. The periosteum is torn and occasionally displaced.

Fracture of the lower end of the radius is sometimes attended with little or no displacement of the fragments. In such cases there is insignificant injury produced on the surrounding tissue, and the treatment is quite simple and satisfactory results is the rule.

With the above clinical features before us, it is quite evident that we have a complicated affair to deal with, and that the treatment must necessarily be directed toward the restoration of the normal relation and the ultimate recovery of the various tissues at and about the seat of the injury.

The main points in the treatment are: 1, Reduction; 2, Fixation; 3, After-treatment.

1. Reduction of Colles's fracture is sometimes not the easiest thing.

However, if we bear in mind the cause producing the injury, it will simplify the mode of reduction. The cause is generally the weight of the body on the hand in extreme extension produced by a fall. In the reposition of the fragments the opposite forces have to be employed. In case it is deemed

desirable anaesthesia should be used. The surgeon should grasp the hand firmly, with the thumb pressing gently upon the displaced lower fragment. The other hand should encircle the wrist, with the thumb on the radius directly above the fracture. An assistant should hold the elbow firmly. Traction and adduction should then be made in order to release the impacted fragment. Press firmly with the thumb on the lower fragment and at the same time flex the hand, when the fragments are released bring them into perfect apposition by careful manipulation with both hands.

This will generally reduce the fracture. If this will not accomplish the object in view, place the hand backward in extreme extension with adduction and traction, which will loosen the impaction, and a reduction will then be made by the described method. Having reduced the fracture of the radius, the reduction of the dislocation of the ulna should be accomplished, if not already effected during the correction of the radial deformity. First make traction and carry the hand as far backward as possible and to the radial side in order to release the styloid process from its entanglement in the annular ligament. Then replace the tendon of the extensor carpi ulnaris, if displaced, by swinging the hand from its backward position to the ulnar side and complete the circumduction by placing the hand in the position of flexion. During the manipulation the thumb of the opposite hand of the surgeon should be placed against the lower end of the head of the ulna and pressure should be made to force the bone upward and into place and secure at the same time the return of the extensor carpi ulnaris tendon to its proper position. Palpation and careful scrutiny after the reduction should always form a part of the surgeon's procedure in order to satisfy himself that the normal relations of various parts exist before the splints are applied.

2. Fixation after reduction is not an absolute necessity, because there is very little liability of disturbance of the fragments, if the reduction is complete. According to Roberts of Philadelphia, the displacement is the result, not of muscular action but of the

vulnerating force, and the muscular surroundings have little to do with the causation or continuance of the distortion. This is undoubtedly a true statement. Nevertheless, it would be unwise to follow Hutchinson's advice, not to use any splints at all. It may do in large hospitals, but in private practice it would be the best means of inviting malpractice suits. In the idea of the average layman or lawyer, it would be preposterous and criminal. Besides, the rest and comfort given the injured parts by well fitting splints during the repair is of great importance.

I generally use two splints during the first week, the material used depends on what is within easy reach. The splints are manufactured on the spot. I generally use eard board; three layers make it strong enough and at the same time light. I cut the splints to conform to the width of the forearm, wrist and hand and make them long enough to reach to the metacarpophalangeal joints. On the palmar splint an elliptical cut is made to fit the eminence on the thumb. The splints are padded with cotton to conform to the normal curvatures of the wrist and hand, and a roller bandage is applied to keep the padding in place. The splints are then secured, the hand placed in semipronation, with strips of adhesion plaster, and the dressing is completed by applying a two and a half inch muslin roller bandage, in such a way that the thumb and fingers are left free. The forearm is then put in a suitable sling. It is not good practice to immobilize the fingers, as there is a great liability to stiffness, if motion is entirely inhibited. The plaster of Paris fixation, in vogue a few years ago, is not to be recommended, as it is liable to produce an undue amount of stiffness on account of the immobilization of the joint for too long a time.

3. The after-treatment is of equal importance in the final result. Passive movements of the fingers should be practiced from the first day. In about five days the splints should be removed and gentle massage applied and passive movements of the wrist joint. Massage will greatly facilitate the removal of the inflammatory product and will

assist nature in its work. The splints ought to be removed every other day for massage. I generally remove one of the splints altogether about the tenth day and in fifteen or twenty days both splints are discarded. If any swelling exists after that time I apply massage once a day, until the inflammatory products have been removed and the functional activity of the injured parts is restored. The length of time to bring this about is dependent on the extent of the injury and the vital activity of the patient. With this treatment a favorable result is the rule and a very little stiffness of the fingers and wrist joint is left after the second month.

HOSPITAL FACES A STRIKE.

Elgin Physicians Resent Presence of an Osteopath at the Sherman Institution.

Elgin, Ill., April 26.—[Special.]—Elgin Sherman hospital, the only institution of this character in the state which is managed and operated entirely by women, is threatened with resignation from every physician now upon the medical staff.

Two days ago, Dr. Murray, an osteopathic doctor, was given the privilege to bring his patients to the hospital. The regular practitioners look upon this act as an affront to the entire medical fraternity. At a meeting of the local medical association several of the hospital staff announced that if Dr. Murray is not removed they will resign.

A meeting of the board of lady managers has been called for tomorrow afternoon. The doctors have withheld their resignations until tomorrow night, but at that time drastic action will be taken unless the affair is adjusted.

Golden Jubilee of Frederick Stearns.

To engage for 50 years in one business is given to few men and on this account the celebration of this anniversary by the old and reliable firm of Stearns & Co. deserves special mention. The New Idea, the Journal of this firm, in the recent issue details the facts of this history in a very entertaining manner. We congratulate the members of the firm and hope and predict many more years of usefulness and success.

Easy Cures.

Dr. Dosem—"To what does Dr. Cutter owe his immense success?"

Dr. Bleedham—"He confines himself entirely to office practice."

Dr. Dosem—"Well, I don't see—"

Dr. Bleedham—"People who are able to walk into the office aren't sick—they just think they are."—Cleveland Leader.

Chicago Medical Society.

The Medical Society of Cook County, Regular meetings are held every Wednesday evening from October to June at the Chicago Public Library Building, Randolph Street Entrance in the large hall on the ground floor toward West end of the Building.
Membership 1512.

OFFICERS:

J. B. MURPHY, 100 State Street President
FRANK X. WALLS, 4307 Ellis Avenue Secretary
A. E. HALSTEAD, 2937 Indiana Avenue..... Treasurer
W. A. EVANS, 103 State Street..... Chairman Medicolegal Committee
WM. HARSHA, 103 State Street..... Chairman Membership Committee

MAY, 1905.

A regular meeting was held Wednesday evening, March 8, 1905, with Dr. Jacob Frank in the chair.

Minutes of the previous meeting were read and approved.

1. Dr. Rosalie M. Ladova read a paper entitled "A Case of Aortic Insufficiency."

2. Dr. D. N. Eisendrath showed and reported the following cases:

1. Case of General Blastomycosis.
2. Three cases of Diffuse Septic Peritonitis following Appendicitis.
3. Hodgkin's Disease.
4. Case illustrating the use of Wolf Skin Grafts.

5. Case of Encapsulated Tubercular Peritonitis.

6. Non-Development of the Testes.

The cases were discussed by Drs. Frank Hugh Montgomery, W. S. Harpole, Oliver S. Ormsby, E. J. Senn, C. O. Young, Carl Beck, and the discussion closed by Dr. Eisendrath.

3. Dr. Rudolph W. Holmes offered the following resolution, which was unanimously adopted, and the secretary requested to forward a copy of the same to the family:

Resolutions on the Death of Dr. Walter Christopher.

The Chicago Medical Society desires to express the sense of the deep loss to the profession and country by the death of the late Dr. Walter S. Christopher, and extends to the family its deepest sympathy.

Resolved, that these sentiments be spread upon the minutes of the Society, and that a copy of the resolution be sent to the family.

4. Dr. Jacob Frank read a paper entitled "A Report of Two Cases of Complete Perineal Prostatectomy by Young's Technique."

See page 443, this number.

5. Dr. James B. Robb read a paper entitled "An Unusually Large Aneurysm of the Abdominal Aorta."

Adjourned.

ABSTRACT.

A Case of Aortic Insufficiency.

By Rosalie M. Ladova, B. S., M. D.

Clinical Assistant and Instructor, Chest, Nose and Throat,
Rush Medical College, affiliated with the University of Chicago.

Mrs. W. S., American, age 52, housewife. Family history negative.

Personal history: At the time of the civil war patient sought medical advice for attacks of dyspnoea and was then informed of a heart lesion. Had recurring attacks of dyspnoea, but had no medical attendance till January, 1903, when attacks increased in severity and oedema of lower extremities reached till above the knees. Recovery followed and she was without medical supervision again till Jan. 6, 1904, when I saw her for the first time. I found her in a state of extreme dyspnoea and cyanosis, with a pulseless wrist and subnormal temperature; restlessly tossing herself in a vain effort to get her breath, with a look of despair in her eyes, she was a picture of distress. For the stertorous respiration the heart sound was inaudible, the cardiac impulse could not be felt.

Under stimulation and use of morphia she rallied and was much improved; the attacks recurred on 10th and the 11th. She became unconscious and delirious, while her pulse responded to stimulation, her mental state remained the same and she died in the evening of the 11th.

Contrary to instructions, she was fed fermented preserved peaches and corn starch pudding, which undoubtedly precipitated the end.

Physical findings: Pulsation in the carotid and thyroid arteries, throbbing in the superficial veins of the neck, cardiac impulse diffuse, pulse 76, not of the water hammer variety; T. 94.4; R. 26; apex at the sixth interspace in the nipple line; only a moderate degree of arterio-sclerosis, heart dullness from the third rib to sixth interspace in the nipple line, one inch to the right of the sternum; lower border about two fingers

breadth below the costal arch. Moist mucous rales in posterior lobes; diastolic murmur at the aortic area, heard all over the precordia, transmitted down the right border of the sternum; round ulcer on the anterior surface of the thigh.

Urine showed a trace of albumen, otherwise normal. Pathological diagnosis, post mortem: Insufficiencia valvulae aortae, hypertrophia cordis; atheromatosis aortae; emphysema pulmonum; oedema pulmonum; hydrothorax dextro; concretio pulmonis sinistrae curu pleurae parietalis; hydropericardium; infarctus hemorhagicus pulmonis dextrae, tuberculosis obsoleta apicis sinistrae; morbus Bright's chronicus; hyperemia mechanica hepatis et liennis; myomato arteri; pelveo-peritonitis obsoleta; hydrops ascites; gastritis chronica; epithelioma cruris dextrae; anasarca et marasmus universalis.

The clinical interest in this case centers in the almost miraculous recovery, in view of the post mortem findings, from an extremely severe attack of angina pectoris and impending paralysis of the heart and the probable further improvement, frustrated by a dietetic error. Other unusual features: Diffuse transmission of the murmur within the precordia and its limited transmission outside of the same; pulse not intermittent and not of the water-hammer variety, quickly responding to stimulation; impaired temperature sense, etiology, outside of only a moderate arterio-sclerosis, lacking. This lesion is rare in females. Of 53 cases collected by Babcock, only 7 in females; urine normal with a distinct renal lesion; extreme multiplicity of post mortem findings.

My thanks are due to Dr. Heliodor Schiller for his kind assistance in the post mortem examination.

General Blastomycosis.

I will point out the principal features of this case and ask the members to examine the patient. Beautiful examples of the organisms were obtained from the ulcer on the patient's leg by Dr. Ormsby. The diagnosis has been confirmed both by the microscope and by the organisms found by a number of eminent dermatologists of this city. The patient was examined this afternoon by Dr. Montgomery, who, with Dr. Hyde, has published fourteen cases of this disease. I have placed by the side of the patient the monograph of Drs. Hyde and Montgomery which contains beautiful illustrations of this disease. The disease is known as blastomycetic dermatitis. Those two photographs which I will pass around are fairly good ones illustrating the lesions.

The disease was first brought to our attention some seven or eight years ago by Gilchrist, and since then there have been quite a number of cases recognized. It is characterized clinically generally by one lesion, or by more or less general infection as this patient shows. It is characterized locally by the fact that the edges of the lesions are raised, sharply demarcated from the surrounding normal skin. These edges contain a number of small miliary abscesses. An-

other characteristic of the surface is fairly well shown in this case, but not so well as it was two or three days ago, that is, a peculiar wart-like or papillomatous condition of the ulcer. It was upon this, even without a microscopic examination, that the diagnosis was made, and the patient brought to the Cook County Hospital. I believe, and Dr. Montgomery and others have agreed with me, that we are dealing here with one of the rarer cases of general infection by the blastomyces. We are beginning to know something about the pathogenicity of the yeast-like organisms that produce pus and general infection, and often causing death through cachexia. You can see the inroads the disease has made upon the general condition of this man. He is a Bohemian, 40 years of age, and first noticed a small, circumscribed abscess which appeared upon the left side of the chest. Following the abscess on the left side of the chest, which healed after using medicine, he noticed an ulcer forming upon the place where the largest ulcer exists at the present time—the posterior surface of the right limb. This was gradually enlarged until it attained its present size. He has an ulcer of the typical blastomycetic type on the left heel and two on the right leg, one of which is large. He has an abscess that formed spontaneously upon the anterior aspect of the right elbow; and some characteristic warty excrescences covered by some crusts under his chin.

As regards the differential diagnosis of the disease, it is to be distinguished from tuberculosis verrucosa cutis, from carcinoma and syphilis, and the only question would be in regard to the serpiginous type of syphilis.

It is much more difficult to differentiate this disease from carcinoma. We have the enlarged hard lymphatics and the disease spreads much more rapidly in carcinoma. I believe it is of one years duration in this case, and is not spreading rapidly.

The differentiation of blastomycosis from tuberculosis is difficult. The only way the diagnosis can be made from tuberculosis of the skin is the fact that tuberculosis seldom appears on the face. I refer to tuberculosis verrucosa. Tuberculosis does not present the characteristic softening of miliary abscesses along the edge. Tuberculosis is not apt to spread quite as rapidly as this disease, but much more slowly. Another characteristic is the finding of the typical organisms, the yeast cells of blastomyces in the miliary abscesses.

Diffuse Septic Peritonitis Following Appendicitis

I wish to present three patients illustrating the progress we are making in the treatment of diffuse septic peritonitis complicating appendicitis, who were operated upon on an average of between thirty-four or seventy-two hours after the onset of the disease. In two of the cases perforation occurred into the free peritoneal cavity. In one there was no perforation of the appendix, but it was a virulent type of appendicitis which is generally recognized as streptococcal, and which we have looked upon as a hopeless type, with general invasion of the peritoneum. I do not mean a type of peritonitis in which we have a little pus scattered around

the appendix, or where there is partially walled off abscess cavity, where we take out the appendix, but a diffuse septic peritonitis, the pus being diffused everywhere over the free peritoneal cavity. The intestines in these cases were bathed in pus as high up as we could reach, almost up in the region of the liver and diaphragm, with liquid pus and fibrinoplastic material thrown out. In one case the condition was purulent; in others we had to deal with a milky, turbid sera. We could not have saved these patients five years ago with the methods then in vogue. We have to thank one man for improving our percentage of recoveries in these cases—Dr. Fowler, of Brooklyn. Dr. Fowler, in 1900, published a paper in which he recommended the Fowler position in connection with operations for diffuse septic peritonitis. Undoubtedly most of you are familiar with it. He also recommended flushing these cases freely with salt solution, putting in drains, and, instead of letting the patients lie flat on their backs, to prop them up in bed or to elevate the head of the bed, the object being that the pus will not gravitate towards the diaphragm where the large lymphatics are but toward the pelvis and by inserting drains in the pelvis we can get rid of the pus quicker than in any other way.

I desire to pass around photographs of a little apparatus we are using in the Michael Reese Hospital, which was suggested by one of our head nurses. It is designed for use in this work instead of using a saw-horse, chairs, tables, or anything of that sort. This photograph shows the elevation of the head of the bed. These three patients were treated practically the same. We did not know before I operated on two of the cases that the peritonitis was diffuse. I did not think the infection had extended beyond the appendix. I made the usual incision for appendicitis in these two, but had to enlarge it. In a third case I made a diagnosis of appendicitis before operating, and made the incision in the median line. The best practice is, in cases where a median incision is made, not to eviscerate, because this adds more or less shock. I took a long nozzle, used one of the larger tubes, and flushed it between the different coils of intestines as much as I could. I used three or four gallons of salt solution in each case. After washing and sponging it out, leaving some fluid in the peritoneal cavity, I inserted a drain towards the pelvis in all cases, in one a Mikulicz drain. Two of the cases were treated with glass drainage tubes plus a Mikulicz drain. Nowadays surgeons have different opinions in regard to the drainage of these cases. Recently at a meeting of the Chicago Surgical Society, Dr. Van Buren Knott read a paper on this subject, which was discussed by men of considerable experience, and the opinion was expressed by some that a drainage tube with gauze inside of it was preferable to other forms of drain. I have reason to believe that a Mikulicz drain, with gauze used inside of it, and which is gradually removed after twenty-four to forty-eight hours, and other gauze substituted, is one of the best drains we can use for that purpose.

The Fowler position was used systematically

in these three cases. I believe elevating the head of the bed is preferable to putting patients who have been operated upon in bed and propping them up with chairs or pillows. By elevating the head of the bed we can keep them in a fixed position at an angle of forty-five degrees. The method we have used in two of these cases and has been followed by excellent results, is giving these patients continuously salt solution per rectum after operation. That was accomplished in this way: We introduced a small catheter into the rectum, and put an irrigator next to the patient, which was elevated a foot or more above the level of the bed, and we had a pinch-cock arranged so that a few drops of salt solution kept on flowing all the time. It is really wonderful the amount of absorption that will take place by the continuous pouring-in of salt solution, and it is very advantageous over the older method of giving these patients salt solution every four hours.

I will briefly speak of the results of Fowler, who says that in former times, under the old methods of treatment, seventy-five patients out of every hundred died from general peritonitis, with appendicitis, up to the year 1900. Drs. R. S. and G. R. Fowler have managed to save 67 cases out of 100. You will readily see that this is an enormous improvement in our mortality. Dr. Van Buren Knott reported 19 cases upon which he had operated for diffuse septic peritonitis, with seventeen recoveries.

The case of this little girl is of special interest. After the operation she had a good many colics, and it looked as though we were going to have post-operative intestinal obstruction, and the only way we succeeded in getting constant bowel movements was to give large doses of magnesia sulphate and cascara daily.

Here is another case, that of a woman of 35, in which there were complications. She had a diffuse septic peritonitis complicating an appendicitis in about a week after the operation. She had a temperature of 102°, with a leucocyte count of 20,000. It looked as though there was a circumscribed abscess somewhere encapsulated between the coils of the intestines. I decided to go in again, but after waiting twenty-four to forty-eight hours, and keeping up catharsis, the temperature dropped again. Such symptoms often indicate the formation of localized abscesses between the adherent coils of intestines.

The third case had a post-operative hernia with adherent intestine so small that it was necessary to operate and resect a portion of the intestine last summer, which we did, and obtained a good result. The whole peritoneal cavity was practically obliterated by adhesions.

Hodgkin's Disease.

This young man shows a well-marked case of Hodgkin's disease. The patient was referred to me by Dr. Ballenger, and I have asked him to begin X-ray treatment for this disease. It is a marked case of Hodgkin's disease, with extensive cervical gland involvement. The patient is twenty years of age, yet the disease is so marked that it has involved to a great extent the cervical and axillary glands.

He began the daily use of the X-ray two weeks ago and the mass on the right side has decreased at least one-third.

Skin Grafting by the Wolf Method.

The next case illustrates a comparatively new method of skin grafting, and I thought it would be of interest to show you this case before all of the parts have healed. In two places on which skin grafts were used healing has taken place, and the others will be practically healed in a short time. The method can best be shown by passing around some photographs taken before the grafts were used.

This young man, last September, while attending to a press-feeder, caught his hand in a sheet of paper which passed in between two rolls, sustaining a compound fracture of one of the phalanges, and extensive crushing of the fingers opening the flexor tendon sheaths that I was in doubt whether to amputate or not. She was taken to the West Side Hospital, the hand was cleaned thoroughly, removing all grease and dirt from it, and to make the description of the case short, I will say that we secured primary union, as far as we could, with excessive scar tissue. Following the operation, on account of the adhesion of the tendon to the scars, the hand was very much contracted, so that it was practically useless. I knew the lengthening of the tendons was not practicable, and that breaking up the adhesions of the joints and cutting the tendons would not do any good. I finally suggested to her that she permit me to anesthetize her and cut the scar tissues where the tendons were adherent to it. The tendon sheaths were destroyed by the original accident. We put on a form of graft known as the Wolf or Krause graft, which differs from the Thiersch skin graft, and from the pedunculated graft which we sometimes use, where we graft from the abdomen. In this case I took two large pieces of skin from the abdominal skin and trimmed off only the subcutaneous fat. The advantage of this method is that you can apply the grafts accurately. You will notice the amount of extension of the fingers which she now has. She has good motion, and in a short time, with exercise by means of a rubber ball, we hope to improve this much more than it is. I will pass around some photographs showing the condition of the hand before operation, and also when the grafts were taken.

Those who have not resorted to this method of skin grafting will at first think that everything is going to be a failure, and that every graft is going to slough. But that is not the case, and it is largely the reason why I brought the case here to exhibit.

Case of Encapsulated Tubercular Peritonitis.

This young man came to me with a history of what was considered by a physician in Indianapolis as an attack of appendicitis, with pain in the right iliac region. When I saw him he had a tumor which projected to the right of the umbilicus. It was soft and fluctuating. Apparently one could reduce it completely. The case was diagnosed by an excellent internist, and I thought it was the same thing when I saw him,

as a hydronephrosis. The tumor seemed to disappear upon pressure from the renal region. Then I changed my diagnosis, and thought it was a mesenteric cyst. There was apparently tympany in the area above the tumor. When I operated I found it was an abscess cavity which extended from the level of the iliac region away up. He had no temperature; no leucocytosis. This condition has been going on for four months. When I found the upper level of the diaphragm, and went over as far to the right as the median line and downwards to the pelvis, it was an encapsulated tubercular peritonitis, the microscope showing giant cells and typical tubercle bacilli.

Non-Development of the Testes Causing Infantilism.

The next case is not mentioned on the program. I am going to ask the members to examine this young man. It is a rare case. The patient was referred to me originally by Dr. M. B. Sincere, of this city. There are some interesting features connected with the case. Every organ has its internal secretion and when the testes are not developed, there is something lacking in the male organism. He is thirty years of age, and well developed so far as the bones go. If you will look at him carefully you will see that his fat is like that of an infant, as is also the skin. There is no hair on the genitalia, and the parts look like those of a child of five or six. If you will palpate the scrotum, you will find that both testes are present, but very atrophic. They are scarcely larger than small marbles. This is not a case of infantilism from non-descent of the testes, but simply one due to non-development of them.

Dr. E. J. Senn: I would like to say a word or two in connection with what Dr. Eisendrath has said concerning diffuse septic peritonitis. I do not think we should allow such an assertion as he has made to go unchallenged. I have never seen a case of general diffuse septic peritonitis recover, and I have seen quite a number of them, especially when we consider appendix operations. The incision that is made for the ordinary appendix operation does not allow free inspection. In the suppurative cases this incision is made somewhat larger. The rule at the present time is to make the muscle-splitting, gridiron incision, and I would like to know what proof Dr. Eisendrath has for calling these cases general diffuse septic peritonitis. He has not explored the entire abdomen. I have seen time and again coils of intestine present themselves in the wound, making one think that he was in the general peritoneal cavity, but by making a careful examination we will find that this is not the case, as I have noticed in one particular instance of traumatic rupture of the intestine. In this case, when I first made the incision, I was certain that I had to deal with a diffuse general peritonitis. But upon more careful examination I found in the upper left quadrant of the abdomen a considerable area of non-infected peritoneum, covered by spider-web adhesions. So I do not think we can allow such an assertion as this to go into print without proof. Almost ever case of diffuse septic streptococci

peritonitis is demonstrated on the post-mortem table. We must consider this subject from a pathological standpoint. The very fact that Dr. Eisendrath got a considerable amount of sero-purulent pus, and stated that there was considerable fibrinoplastic material present, shows that the infecting organism was not of a very septic nature. In all cases in which we have streptococcus infection we do not find any inflammatory product, and the very fact that we do not find an inflammatory product proves its septic nature. In many cases of infection of the peritoneum, due to perforative peritonitis, the lives of the patients are destroyed before there are any inflammatory products involving the peritoneum. In other words, the patients often die of general sepsis without even a perceptible peritonitis. The streptococcus finds its natural habitat in the lymphatic system, and the toxins there soon destroy the life of the patient.

Dr. Eisendrath has not stated whether any one of these cases was streptococcus infection. I hardly think it is possible that there could have been such an infection.

We must be careful in making an incision in the right quadrant of the abdomen. I have observed many times, when surgeons have claimed to have had cases of diffuse septic peritonitis recover, that there were no proofs furnished to that effect. While I believe there may have been a suppurative peritonitis in these cases, they should be called cases of diffuse general septic peritonitis.

As regards the new treatment of placing the patient in a dependent position (Fowler), that is very well. We know that the stomata in the diaphragmatic portion of the peritoneum rapidly absorbs inflammatory products.

Dr. W. S. Harpole: I would like to ask Dr. Eisendrath or Dr. Montgomery a question in regard to this subject. They seem to consider it sufficient to make a diagnosis to find the blastomyces, and they do not say anything about searching the tissues for tubercle bacilli. I would like to ask Dr. Eisendrath whether the tissues in this case have been searched for tubercle bacilli?

A few years ago, in reading a paper by Drs. Hyde and Montgomery on this disease, published in the *British Journal of Dermatology*, I looked over the report of the pathologist very carefully, in an examination of the tissues, for an effort to exclude histological tuberculosis. But no mention of such a search was made. Possibly every case they are reporting now is being searched carefully for tubercle bacilli.

My reason for asking this question is this, that on a previous occasion in a case of blastomycetic dermatitis, which was recognized and pronounced such by a number of pathologists, proved to have tubercle bacilli in the tissues. I stained for them, and found them, and these findings were confirmed by Dr. Futterer, who saw them with me.

Dr. C. O. Young: I was extremely interested in the cases of diffuse septic peritonitis reported by Dr. Eisendrath, since I had the misfortune to lose such a case two days ago from this dis-

ease. I operated in the usual way, put in a drain, and did nothing more except to place the patient in the sitting position and give salt solution, in the manner described. I will say, however, that my patient was in a desperate condition before the operation, and I am interested to know in what condition Dr. Eisendrath's patients were prior to operation. I believe we have come to the stage in the treatment of these cases when we should be honest with each other and be thorough in the description of our cases. There are surgeons making statements now to the effect that they get a very low mortality in cases of general suppurative peritonitis, caused by appendicitis, and there are others who claim that they get nothing but mortality. In other words, their cases all die. We younger surgeons are meeting with this latter experience, and we would like to know which is the truth.

So far as flushing out the peritoneal cavity with normal salt solution is concerned, I believe it has very little influence upon the progress of the case. This method has been tried and has been discarded. If we do any good in these cases, it would seem to me to be due to the fact that we open up and let out the pus; in other words, take off the pressure as we do in cases of other abscesses, and the less we do besides that the better the patient is off. We should not make the removal of the appendix our object at this stage. If we do as little as possible, simply opening up and inserting a drain, we are more likely to get a good result than by adopting more radical measures.

Dr. Carl Beck: I would like to ask Dr. Eisendrath whether he has examined any of the removed pieces of grafts, and whether they did not contain the whole thickness of the epidermis, leaving more or less subcutaneous tissue on the surface, so that the remnant of the Wolf graft is nothing but a keloid after a while.

I have repeatedly used Wolf grafts, and I have found them in the majority of cases to be inferior to the pedunculated flaps, so that I can say that pedunculated flaps are to be recommended, the Wolf grafts usually becoming necrotic on the surface, and leaving nothing but keloid tissue. After examining this case I can see very little of the epidermal surface left on the grafts. I am pretty sure that in time the epidermis will become atrophied. Under the microscope we can see nothing but fibrous material taking place, which naturally is soft, and after a time these tissues will become atrophied. While I believe the function of the fingers will be good, because the injury was not over a joint surface, but between the joint and not very deep, the result of the grafting will be about the same as if there had been plain cicatrization. The cicatrix, after a while, will also become movable, and with a certain amount of orthopedic treatment we may get considerable movement of the cicatrix, and also good function.

Dr. Eisendrath (closing the discussion): I am very glad to get Dr. Beck's opinion in regard to the case in which I resorted to skin grafting. I debated in this particular case for, at least, five or ten minutes as to whether I should use

pendunculated grafts, but decided in favor of Wolf skin grafting, for the reason I had four surfaces, each one of which was about one-quarter of an inch wide by an inch long, and if I took pedunculated grafts, I would later on have to cut the flap to correspond to the space of the fingers, and that would probably take a much longer time, and I would not get as good a result as if I took four pieces large enough originally to fill up the corresponding gap. That is the reason I decided to try a Wolf graft in this particular case.

I did not examine the portion which sloughed off, because I thought it was simply necrotic tissue. I have been watching the case with interest from week to week, and in between the granulation tissue one can see distinct islands adjoining each other of epidermis, and this lower portion, I am confident, is not keloid, because I saw it after the necrotic portion had sloughed off. The only way we can tell absolutely would be to make an incision. It is not keloid tissue that she has over the second finger, but epidermis. So far as the functional result is concerned, I believe it is fifty per cent better now than it was before the operation, and in time, with orthopedic treatment, and by means of apparatus, she will be enabled to use these fingers freely.

In reply to Dr. Harpole's question, I have the superior experience of Drs. Montgomery, Ormsby and Hyde in this particular direction. This is the second case I have had of blastomycetic dermatitis. My first was the fifth case ever published in America, published by Dr. Owens and Mr. Ready, and myself.

As to the histo-pathology to which Dr. Harpole referred, the presence of giant cells in the infiltrated areas of the corium resembling tuberculosis, etc., we know that giant cells can occur in syphilis and other diseases besides tuberculosis, so there is no reason why, in such a chronic inflammatory condition as this is, giant cells should not occur. Dr. Harpole no doubt knows that it is difficult to demonstrate tubercle bacilli in the tissues. As Drs. Ormsby and Montgomery have said, we may have to stain hundreds of sections before we are able to find a tubercle bacillus. The only positive way to differentiate this disease and tuberculosis would be the inoculation test, which has not been carried out in this case.

With reference to Dr. Senn's pessimistic views on diffuse septic peritonitis, I can only say that he will have to modify his methods, as we are progressing rapidly with the treatment of diffuse septic peritonitis. Furthermore, I wish to say, those who have seen cases of septic peritonitis will not be disappointed after trying this treatment.

In regards to what I mean by a diffuse septic peritonitis, that depends on our knowledge of surgical pathology. Personally, what I call septic diffuse peritonitis is this: That the pus is free over the entire abdomen. I did not open the abdomen in any of these cases through a McBurney incision, but used a straight incision, going through the muscles in a straight line. In two of the cases I opened in the appendiceal

region, but I gained a view of the whole peritoneal cavity. In the third case which I opened in the median line, the abdominal walls were so well retracted that every one of the coils of intestine was eviscerated, covered with fibrinoplastic lymph. This does not mean that the abdominal cavity need necessarily be obliterated, but means a different form of infection, so that if we have free fluid with fibrinoplastic lymph, it means a less virulent infection. In the case of the young girl there was an immense quantity of fluid between every coil of intestine. This was the only case of the three I eviscerated. I do not recommend this practice, because it adds greatly to shock. I was very anxious to save this patient, as she had a pulse of 152 at the time of the operation. The case looked like an absolutely hopeless one, and I told the parents so at the time of the operation, saying that there was one chance in a thousand, but that I would make every effort possible to save her. This is what I call diffuse septic peritonitis, when one with the naked eye can see every coil of intestine bathed in pus. We found it in the lumbar region; we found free pus in the pelvis wherever I could reach. Of course, through an incision of this kind we cannot reach the subphrenic spaces. This is out of the question. If one wants to be absolutely and technically correct, in using the term diffuse septic peritonitis, we should never use it except when those spaces are involved.

In one case I had occasion to operate for a threatening intestinal obstruction from post-operative hernia about six months after the original operation. I found adhesions between every coil of intestine wherever I looked in the abdominal cavity. It was not safe in this case to do an intestinal resection, on account of adhesions, and to use the Murphy button; I had to use the suture method. Diffuse septic peritonitis means, so far as the eye can see, the involvement of nine-tenths of the peritoneal cavity with pus, and following it we have diffuse adhesions. One of these patients passed through one attack of diffuse septic peritonitis without operation four years ago, but it was a stormy time for her. She was ill for six months. In the second attack she said she would never go through it again without an operation, and insisted upon an operation being performed within forty-eight hours from the onset. It was a cure where I could not get into the general peritoneal cavity without going through the omentum. The omentum was adherent to the pelvic viscera. I found the intestines agglutinated to each other.

In answer to the question of Dr. Young as to the condition of these patients prior to operation, they showed clinically the typical signs of peritonitis. The pulse ranged in none of them less than 130. There was diffuse tenderness and rigidity of the abdomen in every case.

I think the results of these three cases are encouraging, and I am sure, from my experience, in having had these successful results, I shall go on using the same treatment.

Dr. Frank Hugh Montgomery. The case of blastomycosis exhibited by Dr. Eisendrath should

be of interest to all practicing physicians, since, in addition to the extensive cutaneous lesions, there is probably systematic infection. It is of special interest to those of us who have been working in this field for a number of years in an endeavor to demonstrate to the dermatologists, pathologists and the profession in general that the disease has a distinct clinical and pathological entity. Cutaneous blastomycosis is now generally recognized, cases having been reported in different parts of this country and also in several cities in Europe, though for some unexplained reason the majority of all cases reported have been from Chicago and its vicinity.

In the monograph, referred to by Dr. Eisen-drath, Dr. Hyde and I reported 14 cases of our own. Since that time we have had under our care about a dozen new cases and have seen as many more in the practice of other physicians. Most of these new cases have not yet been published.

While the possibility of systematic blastomycosis has been recognized for several years and a few cases reported, even those who are most familiar with the subject have not believed that the systemic infection would be common enough to be of great interest to the profession at large until recently when the number of systemic cases has increased sufficiently to warrant us in the belief that the subject will soon be of a live and practical interest to every general practitioner.

The systematic case which was worked up so thoroughly and reported by Drs. Ormsby and Miller demonstrated clearly the ease with which cases of this disease could be allowed to pass for tuberculosis, and the necessity therefore of the practitioner being informed on the subject. A systematic case was reported recently before this society by Dr. Cleary. There are in this city and adjoining towns 4 or 5 recognized cases of systematic blastomycosis and at least two others in which the patients are dying from what will probably prove at the autopsy to be systemic blastomycosis. This case of Dr. Eisen-drath is in all probability one of systemic infection, as we found this afternoon typical organisms in the pus from an abscess which had formed spontaneously beneath the skin.

These systemic cases are as yet too few in number to permit a distinct classification or conclusion with reference to their symptom complex. In the cases that have been studied post-mortem, the lungs, liver, spleen, kidneys and other organs have been involved. The symptoms consequently may point to any one of these organs or to all of them. A feature which is common in all these cases is, that while they simulate tuberculosis, pneumonia, nephritis or other recognized disease, the course is somewhat atypical and not that which usually seen in the suggested disorder. The disease with which blastomycosis may be most easily confounded is tuberculosis, with which it has not only many symptoms in common, but also the gross pathology of the two diseases is very much alike, and distinction in some cases would be difficult or even impossible without careful microscopic and bacteriological examination. Sys-

temic infection may follow a long period of cutaneous disorder, as in the case first reported by myself; or, as in Dr. Ormsby's case, the systemic disorder may be primary and the cutaneous lesions be preceded in every instance by the formation of subcutaneous abscesses. In the Busse-Buschke case the systemic and cutaneous lesions appeared about the same time. In at least one reported case there was no cutaneous lesion whatever, the disease being manifested chiefly in the formation of multiple metastatic abscesses in which were found typical blastomycetes.

It is quite possible that in the past some of these cases have escaped detection, even where an autopsy was held, since the gross pathology is so much like that of tuberculosis. In Chicago and its surrounding territory it behooves us, therefore, to be on the lookout for this disease at least in all atypical cases of supposed tuberculosis and in all instances in which metastatic subcutaneous abscesses or nodules form and which cannot be accounted for in other ways.

In response to the question raised, whether tuberculosis has been excluded from these cases, I would say that a careful study of the literature would show that in many of the cases every possible test was made for tuberculosis and the latter carefully excluded.

The systemic case which I reported presented for a number of years cutaneous lesions of a unique character. The patient first came under my care in 1896, when we knew nothing of blastomycosis. It was studied more or less carefully by a number of dermatologists and surgeons in this city, but, though the lesions resembled those of tuberculosis it was generally agreed that the case was unique. I examined many smears and histological sections for tubercle bacilli, and inoculated a number of guinea pigs without finding any evidence of tuberculosis, except the finding of four or five bacilli (which apparently were tubercle bacilli) in a small abscess communicating with the surface of the skin. I was in Europe when the patient died and on my return was told that the autopsy showed military tuberculosis. I accepted the statement, though I was unable to find any of the material or the hospital records of the case.

After I reported the case, Dr. Walker, who (unknown to me) had performed the autopsy, came forward with lung tissue in which he had demonstrated the blastomycetes in large numbers. Though many of the sections of the lung tissue were stained for tubercle bacilli, none could be found.

In all of the cutaneous cases sections have been prepared and searched for tubercle bacilli and in many cases guinea pigs have been inoculated. I reported one case in which a cutaneous blastomycosis was followed by a systemic infection with tuberculosis. Certainly in the systemic case reported by Drs. Ormsby and Miller nothing was left undone to detect tuberculosis had it been present.

Dr. Oliver S. Ormsby: I should like to call the attention of the Society to the preparations under the microscopes. They are smears of pus taken from Dr. Eisen-drath's case this afternoon, both from the cutaneous lesions and the deep-

seated subcutaneous lesion, mounted in one per cent potassium hydrate solution. The double-contour, capsule, etc., of the organism is well shown, and many budding forms are present. The question Dr. Harpole asked concerning tuberculosis in these cases brings to my mind a case in which that condition was ruled out, so far as our work was able to do this. The case occurred in the consultation practice of Drs. Hyde and Montgomery, and was worked out by Dr. Miller and myself two years ago. Tuberculosis was thoroughly discussed in connection with this case, and our efforts were directed to making the differential diagnosis as certain as possible between tuberculosis and blastomycosis. Some time before the patient died, he was given injections of tuberculin in the usual way, without reaction. Tissue taken both before and after death from the various parts of the body failed to show tubercle bacilli microscopically, culturally or experimentally. Many guinea pigs were inoculated at different periods of the disease and at the post mortem table, and not one developed tuberculosis, but all developed either local or general blastomycosis, except those that died within four days of septic infection, these having been inoculated at the post mortem and infected at that time. The skin, liver, spleen, lungs, kidney, etc., were thoroughly examined microscopically for tubercle bacilli, all with negative results. Hundreds of sections, suitably stained, were examined. Drs. Otis and Evans also examined very many sections of the internal organs with similar results. Both Dr. Hyde and Dr. Montgomery saw many sections and confirmed the findings. In all the work not a single tubercle bacillus was demonstrated. Culturally and experimentally, we could develop only blastomycetes, so that in this case of systemic or generalized blastomycosis we feel warranted in ruling out tuberculosis.

I am exceedingly glad to have had the opportunity of seeing another case of general infection, because, three or four years ago, while in Europe, I was positively convinced that there was no such disorder as blastomycosis existing as a primary infection; but since I have been here I have seen a large number of cases and cannot doubt it, and the evidence is more striking since these systemic cases are being demonstrated and the causative organisms are being found in pure culture throughout the entire human body.

A regular meeting was held March 15, 1905, with Dr. Jacob Frank in the chair.

1. Dr. Frederick Mueller read a paper on "Ultimate Results After the Bloodless Reposition of Congenital Hip Joint Dislocations, with Demonstration of Cases Operated on by Adolph Lorenz, 1902, and Frederick Mueller, 1902-4."

Discussed by Drs. John Ridlon, Edwin W. Ryerson, Edward H. Ochsner, John L. Porter, Arthur B. Hosmer, and, in closing, by Dr. Mueller.

2. Drs. Carl Beck and Carrell, of Lyons, demonstrated specimens illustrating a method of formation of a pre-thoracic esophagus.

Discussed by Drs. Edward H. Ochsner, Jacob Frank, and the discussion closed by Dr. Beck.

3. "Trypanosoma, of Lewis: A Preliminary Study of the Trypanosomiasis of the Wild or City Rat in Chicago, with Demonstration of Specimens," by Dr. John H. Hultgen.

Dr. John Ridlon: Mr. President—I do not think it would be in any way profitable for me to discuss this paper. I have been interested in seeing the patients. I am disappointed in seeing so few of those operated by Dr. Lorenz. I have recognized only one of the twenty-nine cases reported by me a year ago. That case, which I reported as "anterior" when seen two weeks after the operation, is now reported as "subspinous." In those reported a year ago the results perhaps were not final; they were the results at that time. The results were sought after earnestly, and of the twenty-nine cases, one case I was unable to trace. When I saw the case in the last six weeks after operation, the head was apparently in the acetabulum. In two the results were perfect anatomically, when last seen by me. In six the head could be felt in the groin, and might be considered somewhat anterior to the acetabulum. Thirteen showed the head above the acetabulum. Seven were failures. By failures I do not mean relapses, but failure to effect apparent replacement at the time of the operation.

I entirely agree with all those who practice bloodless replacement in believing it is the best operation for all operable cases, and the only operation to be considered for bi-lateral cases. This I said in my paper a year ago.

As to what percentage of cases are perfect anatomical replacements and what per cent are good results, depends very greatly upon the opinion of the men who examine the cases and determine the results.

In Boston a committee was appointed by one of the medical societies to examine all the cases that had been operated in Boston, those by Lorenz—six, I think, and those by the other surgeons who have operated in Boston. This committee was composed of one orthopedic surgeon and two general surgeons. In all cases X-ray pictures were provided with the patients, and as unprejudiced an examination was made as it was possible for those gentlemen to make, but they differed entirely in many cases with the surgeons who had operated as to what the real result was. The committee believed some cases were perfect anatomical replacements, while the surgeons who operated did not consider them perfect anatomic replacements, and some cases were considered perfect anatomical replacements by the committee that were not so considered by the surgeons themselves; so that with the most honest of motives there may be a difference of opinion as to whether in an individual case there is a perfect anatomical replacement or an imperfect anatomical replacement. In other words, the head may lie secure deeply in front of the acetabulum or a little in front of it, or a little above it. It does not matter whether we have ten or fifty per cent of anatomical replacements; whether we have good results, anterior, supracondyloid, or subspinous; whether these good results are forty or sixty per cent, it does not signify. The point of interest is as to whether bloodless replacement is the best oper-

ation for congenital dislocation of the hip in all cases that are operable by any method, and I am positively of the opinion that it is the best method. I do not think anyone has shown a method that is better than the bloodless replacement; but whether that maneuver shall be performed as Lorenz performs it, or as each of the operators have performed it, in his individual cases, a little differently, flexing the leg a little more or a little less, making greater or less traction, does not signify. The point of interest is as to whether bloodless replacement is a justifiable procedure. If so, it is the best procedure.

I would like to say a word or two in reply to Dr. Ochsner, that it is a mistake to put an age limit to these cases. The age of the patient has nothing to do with the ability to replace. It is the degree of shortening and fixation in the shortened position which makes it impossible to effect satisfactory replacement in some cases while we are successful in others. I have operated and found it impossible sometimes to effect satisfactory reduction or replacement in bilateral cases, even at the age of five or six, because if the patient has an inch and a half of shortening, it is a difficult case. A patient with an inch and three-quarters of shortening is a difficult case. If it is more than that, it is impossible sometimes, particularly if the neck is short and the head depressed, to effect proper replacement, so that the question as to whether a child is five, ten, or thirteen years of age, makes no difference of itself, but it is the degree of shortening that makes the difference, and it is shortening of the blood vessels and nerves that makes it impossible to bring about satisfactory replacement, and not necessarily shortening of the muscles.

Dr. Edwin W. Ryerson: What Dr. Ridlon has said is the opinion of almost all surgeons who have had experience with this method. There is no question in my mind at all that every congenital dislocation of the hip should be operated upon by some procedure, either by the Lorenz method or some other similar method. But shall we stop there or not? No. In my opinion, no case of single congenital dislocation of the hip should be allowed to go through life without everything possible being done, and there are unfortunately quite a number of cases of congenital dislocation of the hip which cannot be reduced by the Lorenz method, or by the modification of Dr. Hoffa, or by any other similar method. There are a good many such hips. Are we simply to throw up our hands when we get so far as that, and leave it alone and not do anything? I believe we should try the Lorenz method several times. Several trials should be made, because it has been found by a number of operators that if an unsuccessful result is obtained at the first trial, a second trial may prove successful in replacing a congenitally dislocated hip. In spite of all the criticisms that have been made about the operation being harmful, I have seen no particularly bad results from it; I have seen no case of destruction of the blood vessels such as we read about. I have seen a fracture produced by the operation below the trochanter which has healed in the usual way, and the dislocated

hip joint subsequently was perfectly reducible. I do not believe in this "bogey man" of the terrible dangers of the Lorenz operation. We should not stop with an irreducible single dislocation of the hip joint, when we cannot put it back by the Lorenz method. In a number of instances these conditions can be overcome by open incision, and if I had a boy who had a single dislocation of the hip and I could not replace it by the bloodless method, I would want to have it cut down upon and replaced, because it is usually possible to get the head into the socket by operation, even though some of the cases relapse. Therefore, I go further than Dr. Ridlon and say that if we cannot succeed by the bloodless method, we should not hesitate to cut down onto the head and replace it.

Dr. Edward H. Ochsner: During the past two months I have had occasion to look up the statistics of reposition of the hip, and I have found a tremendous confusion on the subject. There are no two men who use the same terms in the same way. That is the condition of affairs that exists almost always when something new is developed in any of the sciences. It is a condition of affairs that must, however, be overcome.

I must differ with Dr. Ridlon a little when he says that it makes no difference what the percent of recoveries is. It is a question that must be answered sooner or later, and I think everyone, who does work in this particular line, that is new, ought to make it a business to record his findings, his results, as honestly and faithfully as he can possibly do so, so that statistics can be gathered and arranged in the course of the next five years that will give us an idea of what the ultimate result is in these cases.

First of all, we see and hear the term "perfect anatomical result." We all know that there is no such thing as a perfect anatomical result after a reduction of a congenital dislocation of the hip. We know there is no such thing as a perfect result in anything, and we should not use the term "perfect anatomical result." We do not expect a perfect anatomical result in a simple fracture of the tibia; but we do expect a good anatomical result. We do expect and have a right to expect a good functional result, and should confine ourselves to the use of the term "good," and by good functional anatomical result we should mean a definite thing. If the head of the femur is in the acetabulum, if it stands permanently opposite the Y-cartilage, we have a good anatomical result. If it is a sub-spinous dislocation, it is removed a little bit from the Y-cartilage, and we no longer have a good anatomical result, though we may have a good or even excellent functional result. It is only by using a term in a definite way that we can impart definite knowledge and reach definite conclusions; and the way the English and German languages have been used in discussing this matter of congenital dislocations of the hip is simply scandalous.

Another thing. We should, first of all, in making up our statistics, differentiate between operable cases and non-operable cases. The treatment of congenital dislocation of the hip

by this method or its modifications has been long enough to teach us the age limits. We should classify patients as below the age limit or above it. Only in that way can we get a little order out of the chaos that still exists. Nearly everybody, who has done much of this work, will agree with me that the age limit for a double congenital dislocation of the hip is about six, and for single is about eight. That is quite universally agreed upon. There are of course occasional exceptions to this rule.

From my own personal experience, which has been limited, as I am not an orthopedic surgeon, I am not nearly as pessimistic as many of my friends are. When I said a good anatomical result, I meant that the head stands opposite the Y-cartilage. When I mean a good functional result, I mean that after the patient's hip has been reduced and the patient discharged from care, can walk along the street without anybody knowing what has been the matter with that patient. I do not mean that such patients can possibly be stage dancers or anything of that kind. I mean an ordinary, good result. If we eliminate patients beyond the age limit, and such patients should eliminate themselves in a few years, we should not have children beyond the age limit with congenital dislocation of the hip. My experience has been limited to fourteen or fifteen cases, and of that number I have reduced all except one, and this was a case of double congenital dislocation of the hip, in which I was unable to effect reduction. I can further say, that of the other thirteen or fourteen cases—I have not had a chance to look over my records—in ten the head in either one or both, as the case may have been, has remained, according to the skiagraph, opposite the Y-cartilage after the last cast was removed. Three of them are still under treatment, so that the result cannot be determined yet. They are still in the casts.

As to the functional result, it is good in every one of them. I will venture to say, that if any one of them were allowed to walk along the street, and you were not told that the patient had had a congenital dislocation of the hip, you would not be able to pick him out.

I have seen a great deal of the work of the three most prominent men in this line of work in the world—the three men who have done more than all others put together probably—and it has taught me a few things about congenital dislocation of the hip. Each one has some strong points, and each one has some weak points. Lorenz was the first to bring out the important point of the functional weight method; that is, you put a bone in the right place, keep it there for a sufficient length of time, and let the patient use it, you are going to have a nearly normal joint. That I have proven by one case that came to post mortem. That joint was as nearly normal as anybody wants a joint. Even Lorenz is slowly disregarding the great fundamental principle which he has laid down. I understand that Lorenz is now keeping his patients in casts only for six months. Hoffa keeps his patients in casts for twelve to sixteen weeks. I regard that as a great error, and I believe this is accountable for the great bulk of relaxations, subluxations and subspi-

nous transpositions. If you have once seen a congenital dislocation of the hip before operation, and have once studied the pelvis carefully after the operation, it stands to reason that it is so plain you cannot make a mistake. In fourteen weeks the cotyloid cartilage cannot be developed sufficiently. Retention of the head depends upon three things, namely, first and least, deepening of the acetabulum; second, the shrinking of the capsule; and, third, and principally, the development of the cotyloid cartilage which holds the head in place. No one can tell me that that cotyloid cartilage will develop from some rudimentary form to its perfect form, as it should develop, after the dislocation has been reduced, in fourteen or sixteen weeks. My patients do not get out of their casts for a year, and that is one reason why they do not have relaxations. Another reason is that the head is properly held in place. When the hip is replaced, the acetabulum is so shallow that it cannot keep the head from slipping; the capsule is so long and lax that it cannot keep the head from slipping. The cotyloid rim is absent, and what is going to keep the head in place in the acetabulum, until the capsule has shrunken, until the cotyloid ligament has developed, except a cast that is properly applied? And there must not be half an inch of padding which allows the head to move this way or that; if the knee moves half an inch either way, the head may move that much, and once out of the acetabulum you are lost. All the men I have seen work, use cotton. They should use nothing but stockinet, and they should apply a cast so that it can be worn a year. If they do, they will have very few relaxations.

There are one or two things that most men do that are bad: After they have reduced a dislocated hip, they allow it to redislocate from two or three to twelve times to see how it works. I have not seen a surgeon who does not do this. After I have had a dislocated hip reduced once, that is all I want. I do not want the head to slip out of the acetabulum again; I want it to stay there. After you have once reduced a dislocated hip joint, you throw it out three or four times and make it very easy for relaxation to occur afterwards.

Another thing: Most men, instead of depending upon the action of the hamstring muscles, which normally pull constantly against the femur and push the head into the acetabulum, overstretch the hamstrings, so that they are useless afterwards. If we will remember the great fundamental principle Lorenz developed, when he first brought out this subject, and apply it in every case and not introduce too many niceties which are useless, we will have a much better percentage of recoveries than we have now.

Dr. John L. Porter: There is not much left for me to say on this subject. I wish to applaud the statement that Dr. Ochsner has made, first and chiefly, in regard to stretching and overstretching the hamstring tendons. I believe this is a mistake, and with Dr. Ochsner I agree that constant traction of the hamstring tendon upon the femur does more to help keep it in place than

almost anything unless it is a plaster cast. The padding which we have used for these casts, many of them, has been too thick. I certainly believe that stockinet is enough, because I have seen several cases of congenital dislocation of the hip in which I knew that the head was in the acetabulum after the operation was done, yet subsequently proved to be in front of the acetabulum when the cast was taken off, and I believe that the stretching of the hamstring tendons, the thick padding which allows a little play of the head of the femur, and the extreme abduction were the three factors which contributed to the transposition of the head of the femur in front of the acetabulum, instead of holding it in place.

I would like to have Dr. Mueller, in closing the discussion, tell us in how many cases he has obtained what he calls perfect anatomical replacement. I have seen enough of these cases to know that we cannot tell anything about the position of the femur by seeing a child walk.

Dr. Mueller (closing the discussion): In regard to the remarks made by Dr. Porter, I pronounced in each case whether it was a perfect anatomical result or a subspinal position.

About the age limit, I wish to say that I agree with Dr. Ridlon that there are no absolute age limits, though we have relative age limits in a general sense. I remember one case, a lady of twenty-five years, in whom reduction of the dislocated hip was accomplished very satisfactorily. On the other hand there may be some cases that are irreducible, although the children may be from two to three years of age. These cases, however, are exceptions.

Therefore I do not share the opinion recently expressed by Dr. Sherman of San Francisco, that one possibility of reducing a hip joint stands against an overwhelming majority of impossibilities. It must be considered strange, to say the very least, that Dr. Sherman pronounced only one hip reducible among twenty-nine cases. The only excuse for this strange statement may be that he judged these cases from the mere aspect of the open joint, without trying the bloodless reposition.

With reference to the stretching of the hamstrings, I wish to state that this is not a step which belongs to the method of operation rather than to the after-treatment. Certainly the tonus of the tightly stretched hamstring muscles works the head into the socket. But if we avail ourselves of this measure by not stretching the hamstrings, we risk the appearance of a knee contracture.

I saw such a case which I reported upon in 1902 at the West Side Hospital. The child was kept there for thirteen months without having any attention paid to the stretching of the hamstring muscles. When I removed the cast both knee-joints were fixed in a rectangular position and could not be stretched at all. In pursuance to this, I had to make a redressment of the knee joints; treating each side in two sessions and having performed previous to that the tenotomies of the biceps, semimembranosus and semitendinosus, I succeeded at last in getting the knees straight.

I do not wish to say that such cases are the rule, but that they are apt to happen. Therefore I consider it much better not to take such risks and to stretch the hamstrings, as a knee contracture may annihilate the whole result of the hip operation.

Demonstration of Specimens Illustrating a Method of Formation of a Prethoracic Esophagus.

By Drs. Carl Beck and Alexis Carrell, of Lyons, France.

Dr. Beck said: I wish to make a few remarks in regard to the formation of a new esophagus. Operations on the esophagus become more prominent recently on account of the work of Mikulicz and his assistant Sauerbruch on this organ. Professor Mikulicz has succeeded in operating on the esophagus by the aid of an air chamber, and he has reported at recent meetings of the German and French societies a number of cases of operations on the esophagus.

In our experiments we tried, without the aid of such an apparatus, to make by a plastic a new esophagus.

The esophagus is rarely the object of operations. These operations are done for cancerous obstructions and for benign obstructions. The best results will be obtained in benign strictures of the esophagus. Professor Mikulicz has operated on a number of malignant tumors with the aid of the Sauerbruch chamber. He lays bare the esophagus, resects transversely a portion of the organ, and unites the two ends. The operation which we suggest for bringing together the two ends is by means of a plastic of the esophagus. We have made a number of experiments in this direction, and the results of these experiments I am going to show you. (Here Dr. Beck made a diagram of the stomach.) First, we started to improve the operation of gastrotomy by the formation of a plastic tube in such a manner that we made a tube out of a portion of the larger curvature of the stomach. The gastric artery, which is given off from the lienalis along the side border, runs through the two layers of peritoneum, is taken along with this flap (indicating), and supplies the nutrition of this flap, which, when it is separated, can be turned and made into a tube, and this portion of the stomach (indicating) can be sutured. This small tube we have used as a esophagus. We have turned it upwards and made a gastrotomy which would allow to retain the contents of the stomach, and some of the dogs upon which we have experimented have a perfect fistula, retaining the contents now for two and a half months. The operation has gradually been enlarged in such a way that we have taken the largest portion of the curvature of the stomach and formed a long tube of the entire large curvature of the stomach, turned the tube upward, and brought it forward on the anterior surface of the thorax, and united with a section of the esophagus from above. We laid bare the esophagus from above, brought it into the surface of the thorax and united it with the gastric esophagus. We have a communication between the mouth cavity and stomach through this new esophagus. This op-

eration can be made without the use of the Sauerbruch chamber, but it might be of great value with the Sauerbruch chamber, because the esophagus can be laid in the bed of the resected esophagus when strictured, and can be made in perfect shape, so that the passage from the mouth down to the stomach would be absolutely normal.

Those of you who have seen cases of benign strictures of the esophagus treated with bougies will see the importance of such a plastic.

(Dr. Beck then exhibited specimens illustrating the method he had described.)

Dr. Edward H. Ochsner: I would like to ask Beck whether this artificial esophagus has taken on function, and whether it will pass food down into the stomach. I could not understand from his description whether it would do this or not, or whether it had been tried. Furthermore, whether the human stomach would be long enough in proportion to the distance from its cardiac end to the gullet to make the thing applicable and feasible to the human being.

Dr. Jacob Frank: I noticed in the specimens that were passed around stitches are still in. Apparently the animals died or were killed before the results were obtained.

I would like to ask if any of the animals recovered sufficiently for the sutures to have disappeared, and if so, what the results were afterwards. If Dr. Carrell has carried out these experiments, I would like to ask him whether he knows of any cases where the animals have recovered and how long after the operation they remained well.

Dr. Beck (closing the discussion): What I have said is mainly a communication as to the anatomic possibility of these experiments. Our experiments are too recent to say anything about physiological or other results. You will notice the stitches in a specimen fresh to show them in position, as well as to show the relation of the strictures. We have not yet made sufficient experiments to judge of anything like Dr. Frank asks about. We have made measurements on the cadaver which show that such operation is feasible. We have no chamber to make such experiments. The distance from the esophagus in front in large dogs is much longer than the thoracic esophagus in the normal human being, and this esophagus would be much shorter in the human being. We brought these specimens here to show the anatomic possibility. We are impressed that this plastic is possible if we had the air chamber at hand and we could make one of these junctions in animals, and perhaps in the human being, if we had a suitable case. If we do that, we will report later the results.

A regular meeting was held March 22, 1905, with Dr. John E. Owens in the chair.

Dr. Richard C. Cabot, of Boston, Mass., delivered an address entitled "the Personal Factor in Hygiene," which was discussed by Drs. John E. Owens, Frederick Leusman, C. W. Abbott, Rosalie M. Ladova, and the discussion closed by Dr. Cabot.

(This discussion was all out of order, and

the stenographer was instructed not to transcribe it.)

On motion of Dr. Edward F. Wells, a vote of thanks was extended to Dr. Cabot for his address.

Dr. A. C. Croftan read a paper on "Four Newer Points in the Practical Management of Diabetes."

Discussed by Drs. Joseph Miller, Edward F. Wells, R. W. Webster, A. R. Elliott, and the discussion closed by Dr. Croftan.

Dr. Arthur R. Elliott read a paper entitled, "A Case of Graves' Disease with Unusual Associated Lesions."

Adjourned.

Dr. A. C. Croftan discussed four newer points in the practical management of diabetes under the following heads: (1) The danger of too much meat; (2) the danger of too little carbo hydrate; (3) some errors of fat feeding; (4) some experiences with the "oatmeal cure" and similar methods of dieting. He called attention to the fact that proteids are a very prolific source of sugar in the body as manifested by the appearance of sugar in the urine in diabetes even when patients are placed on a diet containing no carbo hydrates, and as manifested further by the fact that the sugar excretion in such cases can be made to fluctuate with the amount of proteid ingested; of certain experimental evidence to prove the same point and of the finer mechanism of the conversion of proteid to carbo hydrate in the body nothing was said in order not to argue too many theories. The chief dangers of too much meat are threefold, viz: (1) The blood and tissue juices are flooded with superfluous nitrogenous waste that changes the molecular concentration of the blood and interferes with cell function; (2) a continued excess of proteid reduces the tolerance for carbo hydrates; (3) a proteid diet favors acidosis on account of the formation of phosphoric and sulphuric acids. Attention was also called to the fact that different albumens influence the sugar excretion in different ways and that a single albumen (e. g. egg albumen or casein or muscle albumen) given alone seems to produce less glycosuria than several kinds of albumen mixed.

Under the second head, Dr. Croftan discussed the influence of carbo hydrates upon the formation of the substances of the acetone group, i. e. acetone, diacetic acid and oxybutyric acid. He mentioned the fact that in normal subjects the withdrawal of all carbo hydrate led to an excretion of these bodies and that the administration of carbo hydrates readily again caused their disappearance; in diabetes of mild types the same conditions obtained and the withdrawal of all sugars and starches therefore favors acidosis; however, in severe types unfortunately the administration of carbohydrate does not seem to exercise so striking an effect upon the acetone, etc., excretion as in milder cases and in normal subjects; nevertheless in advanced degrees of diabetic acetonuria the administration of some carbo hydrate should always be tried, for the exclusion of carbohydrate forces the organism to attack its own albumens and fats in order to furnish carbo-

hydrate groups; this leads to a nitrogenous deficit that is not always easy to compensate by meat feeding, as demonstrated above.

Fat also forms sugar presumably by way of glycogen; the sugar formed in this way seems however to readily undergo combustion in the diabetic organism; at least fat feeding never seems to exercise an influence directly upon the glycosuria. It is important to remember that in calculating the caloric value of fat in feeding diabetics only that amount of calories is utilized that is represented by the dextrose, the fat is changed to; thus 1g. of fat does not produce 9.3 calories of available calories in the diabetic organism but only the calories that are generated by the 1.61g. of dextrose that this 1g. of fat is converted into, i. e. 1.61 times 4.1 equal 6.6 calories. In feeding fat, therefore, more than the calculated caloric value must always be given. Much has been said in regard to the danger of producing acidosis by fat feeding; as a matter of fact butter does increase the acetone etc., excretion in normal subjects and in diabetics; a large part of this effect can be removed however, by first washing the butter with water to rid it of free fatty acids. In diabetes, moreover, as has repeatedly been shown, the effect of butter upon the acetone excretion does not become apparent until large quantities (i. e. up to 200 g.) are given and then the effect is relatively small; moreover, this effect persists only during the first 10 days or so, after that time the acetone values seem to fall again even though the same large quantities of butter are given. All in all fat is one of the most valuable adjuvants to the diabetic diet and too much can hardly be given; it should, therefore, be administered to the limit of the patients digestive power.

Dr. Croftan described his experience in a number of cases of diabetes that he had placed on the so-called "oat meal cure" first advocated by von Noorden. He gave a short review of other so-called cures with single carbohydrates, as the rice cure of von Duhring, the potato cure of Mosse, the milk cure of Winternitz, and others. They all seem to be based on the fact that occasionally a diabetic can tolerate large quantities of a single carbohydrate just as he can sometimes, as shown, above tolerate single albumens better than a mixture of several. Of nine cases treated rigorously with oat meal, four were decidedly benefited for the time being, the sugar in two instances decreasing very markedly at once; in three cases the results were quite indifferent and in the remaining two cases the results were directly bad, both cases succumbing to coma possibly because valuable time that should have been given to an energetic alkali therapy was sacrificed. So small a series is, of course, without much casuistic value, particularly as the cases all differed in severity and partially in type; nevertheless so much can be learned that the oat meal cure is by no means a panacea, that it occasionally helps but also occasionally does harm, and that it is necessary to strictly individualize in each case in which it is administered. Despite the reduction of tolerance towards carbohydrates (given in the ordinary

way) that seemed to follow one or two oat meal courses, despite the terrific acetonuria that was seen to develop in several cases after the oat meal was stopped and ordinary feeding was resumed, the "cure" nevertheless should be tried in hopeless cases, for it may offer a chance, though a slight one, that the diabetic process may occasionally be arrested temporarily and life prolonged.

Discussion on Dr. Croftan's Paper.

Dr. Joseph L. Miller: Dr. Croftan has called attention to some of the fallacies in the treatment of diabetics, and I wish to mention another one which has especially come to my attention, that is, the recommendations by physicians to patients of gluten flour. The patient is given a fairly well regulated diet, with the advice that he may take freely of gluten flour or gluten bread, which he can purchase on the market. The New Hampshire State Board of Health has examined thirteen or fourteen diabetic flours that have been placed on the market, and they were surprised to find that a large number of these had practically the same amount of starch as is contained in ordinary bread. At least one of them had 72 per cent of starch, and a number of them over 65 per cent. Of the thirteen there were only three that had less than 15 per cent of starch. A few years ago I had occasion to have patients try several brands of gluten flour which they bought on the market, and found that they passed during that time an amount of sugar equal to that which they passed when they ate the same amount of ordinary bread.

We must be careful in recommending to these patients that they may buy gluten flour or gluten bread and to eat as much of it as they usually do.

Dr. Edward F. Wells: In connection with the excellent paper presented by Dr. Croftan, I would question the indictment which he has brought against the general profession as to the use, certainly within my time, of such an exclusive meat diet as he has represented. I have seen a fair number of cases of diabetes, have gone over their past histories, and very few indeed have ever been subjected, for any considerable time, to such a strict meat diet as has been stated. I do not believe that the total amount of harm done by the dietetic directions of physicians in the past has been very great.

As to the so-called "oatmeal cure," I fail to understand why such a mess, as has been described, can by any possibility be any more valuable than oatmeal alone without egg mixed with it, and why egg albumen cannot be taken with oatmeal, in a palatable manner, when taken with cream and butter. What is the difference between oatmeal so prepared and graham bread or starch in any of its original forms? Why should physicians, who ought to know better, prescribe any such dietetic absurdities as the oatmeal mixture which has just been mentioned? I have seen it used during a considerable period of time, and certainly to my mind, at least, it has no advantage over the same amount of starch in any other form, the same amount of eggs in any other form, or the same amount of fat in any other form.

Dr. R. W. Webster: I was very much interested in the paper of Dr. Croftan, and more interested perhaps because I have had some opportunity within the last year to study the oatmeal cure of Professor von Noorden. Professor von Noorden does not advocate the oatmeal cure as a cure-all. He says that in certain cases of diabetes, that show a large excretion of sugar, and, at the same time, a certain percentage of acetone, a small positive reaction for diacetic acid, and a minimum of oxybutyric acid, can be cured for a certain space of time by the use of this oatmeal diet. Certain cases of diabetes, as is well known, excrete a large amount of sugar, and show no acetone or diacetic acid in the urine, but have a large amount of beta-oxybutyric acid. This condition shows that oxidation in the system is much below par, otherwise the beta-oxybutyric acid would not be excreted. Von Noorden does not advocate the oatmeal diet in these cases, but in those in which there is a small amount of acetone or diacetic acid.

Dr. Croftan, I think, has represented the method of administering this oatmeal cure a little too radically. Professor von Noorden's method of giving this cure is to make a thick soup consisting of 250 grams of oatmeal, 100 grams of proteids, and about 300 grams of butter, with some water and a little salt. The mixture is not a bad one to take.

Oatmeal, as ordinarily given in this country, is given with cream and sugar, but when taken with butter and a little bit of beef broth or something of that sort is quite as palatable. This is given in small doses every two hours throughout the twenty-four; and the results are more or less sudden; diminution in the amount of sugar is great; the acetone reaction disappears, and tolerance in some cases is increased, while in others it is diminished.

Concerning some of the other points mentioned in the paper, I wish to say that, in the first place, the use of too much meat, as is well known, or the use of a diet consisting of meat will diminish the acetone bodies in the urine. The reason for this was not known until recently, when it was shown that meat contained a large amount of sugar in its inherent molecules. Therefore, sugar is the active part of meat as far as its influence on the excretion of the acetone bodies is concerned. Meat alone, the proteid part of meat, does not diminish acetoneuria; it is the sugar of meat that does the work. As Hirschfeld has worked out, the lack of sugar in the food is the cause of the acetoneuria. The acetone bodies do not come from the hydrolytic decomposition of the cell proteids, or from the decomposition of the cell carbohydrates, but they must come from the oxidation of those bodies. In order for this to take place, nascent oxygen must be derived from the oxidation of the sugars. I think Dr. Croftan stated that the proteids were largely accountable for the increase in the acetone bodies. If that be true, I would take marked issue with him on that point, inasmuch as recent experiments have shown quite conclusively that the lack of sugar in the food, or lack of oxidizing body in the food, is the cause of the acetoneuria.

Regarding the influence of fat upon the meta-

bolic changes in diabetes, it is, of course, well known that they, both in the lower and higher forms, increase the acetone bodies. Hence it is rational to limit, to some extent, the intake of fat, rather than to increase it as has been advocated.

Dr. Arthur R. Elliott: As illustrating possible untoward effects which may follow the oatmeal treatment, I would like to report briefly two recent cases. One was a case of a lean diabetic, forty years of age, who was undergoing rapid emaciation; he had glycosuria, 3 per cent, and marked acidosis. Two weeks after he was put upon the oatmeal diet, he developed cardiac dilatation, became bed-ridden, and shortly after died from the effects of his cardiac failure.

The second patient was a younger diabetic, twenty years of age, who had an enormous polyuria, totaling, when she first came under observation, six quarts in twenty-four hours; 3 per cent of sugar in the urine; there was also marked acidosis. She was placed on the von Noorden oatmeal gruel diet, with bacon and black coffee. Twelve days after the institution of this diet she developed dropsy of the extremities. On listening over the heart, a mitral murmur could be heard. The patient became dyspneic on the slightest exertion. She recovered, at least temporarily, and this improvement still prevails.

These are two experiences among a number of cases in which the diet may have been the cause of the cardiac symptoms or may be nothing more than a coincidence, still I have been inclined to regard it as something more than a coincidence, and believe that the cardiac breakdown was due to the withdrawal of animal proteids.

Dr. Croftan (closing the discussion): The fact that a diabetic occasionally does not improve on the oatmeal treatment does not warrant us in condemning the method altogether. I was very careful to emphasize the uncertainties of this "cure" and its limitations. It has been tried extensively abroad within the last year and the results obtained by foreign clinicians in large series of cases are essentially the same as those that I obtained, i. e., some very severe cases were very much benefited, some cases were not influenced in any way and a few cases were apparently harmed, although the latter proposition, in view of the protean character of the disease, is difficult to prove. At all events, I think that so much is clear, viz.: that in any severe case of diabetes, particularly in adolescents, in which the ordinary dietetic means fails to elicit any response, the oatmeal treatment, or exclusive feeding with some one starchy food, is deserving of trial.

I do not like to hear Dr. Wells make the statement that he does not see how this method can be of any use. Try it, Dr. Wells! and when you have collected the statistics on the subject including your own results, let us hear from you again. Such a priori condemnation of a new method of therapy that has the sanction of leading clinicians here and abroad sounds bad. There were those some years ago who got up in meeting and said similar things about the role

of microbes in the production of infectious diseases; they, too, failed to see how it could be. The burden of proof is on you, Dr. Wells, to show that the method really is "no good."

In regard to Dr. Webster's criticism that meat does not increase acetonuria, I can only reply that I meant to say acidosis and not acetonuria. If I really said acetonuria, then I wish to stand corrected.

Following is a list of delegates and alternates to the Illinois State Medical Society:

Delegates—Billings, Gehrmann, Cook, M. Frank, Evans, Wilder, Dodd, R. Campbell, J. R. Walker, G. F. Lydston, Stowell, Kuflewski, Preble, Harsha, Bacon.

Alternates—Houston, Small, Plummer, Faith, Anthony, R. Campbell, Lobdell, O'Byrne, Feville, Butler, Vanderslice, Wylls Andrews, McMartin, F. X. Walls, R. Holmes.

JOINT MEETING OF THE CHICAGO NEUROLOGICAL AND CHICAGO MEDICAL SOCIETIES, MARCH 1, 1905.

Dr. R. R. Campbell in the chair.

The following papers were read and discussed:

1. Remarks on the Pus Infections of the Genital Tract in the Male, by Dr. W. T. Belfield.

2. X-Rays as a Means of Diagnosis in Kidney Surgery, by Dr. A. D. Bevan.

3. Diagnosis of Ureteral Stones, by Dr. M. L. Harris.

4. An Attempt to Utilize the Electric Conductivity of the Urine for Clinical Purposes, by Drs. Gustav Kolischer and L. E. Schmidt.

5. Demonstration of Apparatus for Testing the Electric Conductivity of Urine, by Dr. B. C. Corbus.

6. Diagnosis of Renal Syphilis, by Dr. R. R. Campbell.

This symposium was discussed by Drs. R. B. Preble, Carl Beck, Joseph F. Smith, Alex. Hugh Ferguson, David Lieberthal, William T. Belfield, Arthur D. Bevan, Dr. Alfred Parker, Gustav Kolischer, and the discussion closed by Dr. Campbell.

Pus Infections of the Genital Tract in the Male.

Dr. William T. Belfield read a paper on this subject, in which he stated that pus infections of the genital tract in the male are induced by the gonococcus and by the common pyogenic bacteria. To the latter the healthy urethra is immune, since they are found as constantly in the average urethra as in the average mouth; they invade the urethral tissues when the vitality of the latter is reduced by stricture formation or by senility. Pus infections of the senile prostate are common, even before urethral instruments have been introduced. They are commonly mistaken for prostatic hypertrophy, because the subjects are elderly; and they have furnished brilliant cures to the Bottini operation, castration and prostatectomy, though curable without operation, by massage and silver nitrate injections.

The penile urethra is a watershed whose summit is near its middle; the bulbous urethra

is therefore a catchbasin for pus during a gonorrhea, and should be washed out by injections; otherwise it becomes the site of stubborn strictures.

The lacunae, ten to twenty in number (the posterior ones opening toward the bladder) the utricle and the prostatic follicles, are accessible to both urethral and internal medication. They therefore harbor the infection after the general surface is cured, and may reinfect the latter.

As the embryonic cloaca furnishes both trigonum and deep urethra, a pus infection which reaches the prostate, as gonorrhea usually does, is apt to invade the trigonum also; but it stops there, the rest of the bladder being seldom invaded, as the cystoscope shows. "Gonorrheal cystitis" is a misnomer for an infection limited to the deep urethra and trigonum.

Pus Tubes in the Male. The genital duct proper—seminal vesicle, vas deferens, and epididymis—reacts to the pyogenic bacteria just as does the urethra—that is, by suppuration. This fact has been hitherto overlooked, and gonorrheal epididymitis is even to-day treated as a medical rather than as a surgical disease, probably because fluctuation in the epididymis is so seldom recognized. The author's investigations have shown that the pus infections of the male genital duct are quite analogous to those of the Fallopian tubes; that pus tubes are quite as common in the male as they are known to be in the female; and that acute epididymitis, gonorrheal or other, should be treated as a suppurative process, by incision and drainage. While this may be omitted in the mild cases, it should be practiced in the severe grades, especially when acute hydrocele and scrotal edema appear, for these are infallible signs of suppuration. In chronic epididymitis also, especially when a painful and tender swelling persists in the epididymis, incision or excision of the pus focus may be required.

Direct Medication of the Vas and Vesicle. The author has practiced a therapeutic measure which seems to be novel, namely, the injection of the entire vas deferens and the seminal vesicle through a needle introduced into the vas, just above the epididymis. The therapeutic value of this measure is yet to be determined; at present it is merely asserted that the mucous lining of the vas and seminal vesicle can be mediated in this way.

The pelvic organs of a cadaver were shown, in which this injection had been practiced in situ with Prussian blue; the injected vas and vesicle were seen to be distended and blueish in color.

X-Rays As a Means of Diagnosis in Kidney Surgery.

Dr. Arthur Dean Bevan called attention to the fact that the first work that was done in this country in this line was done in Chicago; that very early after the discovery of the X-ray by Roentgen, Dr. Otto Schmidt developed a complete laboratory for X-ray purposes in this city. He was assisted by Mr. Fuchs, and very early in the work Dr. Bevan had the opportunity of submitting a medical student to

the X-ray and obtained a very good plate. It was a case in which he had already removed a stone from one kidney, and later symptoms had developed suggesting stone in the other. He took an X-ray picture and found on the suspected side very definite evidence of stone. At about the same time Dr. L. L. McArthur had a case which was successful in the sense that the X-ray picture showed a shadow which later proved to be a mass of concretions of gravel, but not a single definite stone. These two cases were the first reported in this country, and were reported before any of this work had been done on the continent. This work was done in Chicago in 1897. Some British and Scottish surgeons had a little before this reported some successful work. He did not think these cases attracted much attention for some time. Even as late as a year ago one of the most prominent surgeons in this country was in the laboratory at the Presbyterian hospital, and with a wave of his hand, said: "I have no confidence in the use of the X-ray as a means of diagnosis in kidney work; I have been fooled by it, and I regard it as an unreliable piece of evidence." However, since that time very definite results have been obtained by the use of the X-ray. Leonard, of Philadelphia, picked up the work which was begun in Chicago, and developed it to a point where he showed pretty conclusively that the evidence furnished by the X-ray was to be relied on, and even went so far as to make the claim which at that time was very generally ridiculed, that the negative evidence, where the differentiation was clear, was also to be relied upon. A little later, after Leonard's paper, Dr. Bevan published a paper in the *Annals of Surgery* reporting a limited number of cases. He thinks at that time he reported thirteen or fourteen cases, and made the same claim that the X-ray as a means of diagnosis was to be relied upon to a greater extent than any other means we had at our disposal in cases of kidney stone. He went so far as to make the claim that the X-ray picture, showing good differentiation, was to be relied upon very often more than an exploratory incision, because he had early in the work removed a number of kidney stones in cases in which other surgeons had made exploratory incisions and had failed to find stones. He knew from the criticisms that were made at that time that the medical profession generally did not accept his conclusions. Fortunately, this work has been picked up by a number of other men, and he mentioned especially Kummel and his assistant, Rumpell, in Hamburg. He thinks the best exposition of this entire work is to be found in a comparatively recent number of the *Beitrag zur Chirurgie*, from the pens of Kummel and Rumpell. Kummel takes the position taken by Leonard and the speaker, and presents practically these conclusions, that the X-ray, properly used, will detect a stone in any individual, no matter how thick, and a stone of any chemical composition; that the detection of the stone does not depend so much upon the chemical composition or thickness of the individual as it does upon the proper use of the X-ray. He thinks the majority of surgeons would not

believe that statement. Kummel goes on and says, from experience at that time covering eighteen cases of positive examinations, which were later operated on and the stones found, he meant by that a positive result in eighteen cases in which the X-ray was taken, showing stone in the plate, and the patients were operated upon and the stones found at the time of operation, and in two additional cases he found a stone post-mortem. In a similar number of cases where no stone was found, but where a stone was suspected, other lesions, such as hydronephrosis, pyonephrosis, hypernephroma, tuberculosis, etc. The conclusions of Kummel, Leonard and himself are not accepted to-day, and he wanted to point out why. Most of the work done with the X-ray in kidney stone has been poor work. He has seen a lot of work done at hospitals and in laboratories and submitted to medical men as finished, expert X-ray work, which was not really worthy of attention, which showed no differentiation. He had seen these plates taken by men who were not competent to interpret the findings and determine whether or not stone was present, operate upon the case, find no stone at the time of operation, and condemn the X-ray. The X-ray does not lie in these cases. The X-ray has absolutely no fallacies. To be sure, there will be a given group of cases where the evidence is uncertain, where the individual who is doing this work who is competent to do it and to interpret the work will distinctly place them in an uncertain group. On the other hand, the great majority of cases will be very clear and definite, and will belong distinctly to a group where there is stone or where there is no stone present, and where the differentiation is clear and definite. We have no means at our disposal to-day which gives us the evidence that the X-ray does in kidney stone.

The work which he has been able to do in this line is about the same as that reported by Kummel in the *Beitrag*, comprising about forty cases. In a discussion of this subject last year, Dr. Joseph F. Smith reported twenty-six or twenty-seven cases of his (Bevan's) work, which he had handled, and the results up to that time were the following: In thirteen cases positive findings and stones found and removed at operation in about the same number of cases, with negative findings, at the time of operation other pathological conditions than stone were found. There was one doubtful case which was clearly stone clinically, and the stone was found at the time of the operation. After the operation one could clearly see in the plates a stone behind the twelfth rib, in a position where it is not often found. The ordinary position of stone in these cases is an inch and a half from the transverse process and a little below the twelfth rib.

With reference to the differential diagnosis between stone and other lesions of the kidney, and between stone and other conditions, such as appendicitis, gall stones and some other complicating conditions on the right side, in a series of several hundred cases collected since the introduction of the X-ray and the use of it in kidney stone work, he has had three cases in

which a diagnosis of appendicitis was made, where the evidence seemed to be definite, the appendix was removed, and where later the X-ray disclosed a stone in the kidney. It is difficult to say definitely whether the symptoms which occurred in these cases were at all times due to the stone, and the appendix was not the organ at fault. In two of these cases he believes that the appendix had not given rise to any symptoms. The history in all three was quite similar: A series of attacks, the appendix removed, and later attacks after the operation. Then, another review of the situation, with the X-ray picture determining the presence of stone, the stone removed and patient cured. A rather interesting feature in one of these cases was found. After the removal of the appendix first and the stone later, the patient was not cured, and a further review of the case showed tubercle bacilli in the urine. The other kidney was found normal, and a nephrectomy resulted in a permanent cure.

In the discussion of the differential diagnosis we should consider gall stones. He has had this experience: The wife of a physician, with repeated attacks of pain upon the right side, suggesting possible attacks of appendicitis, or possibly gall stones, or possibly kidney lesion. A large kidney upon that side fairly movable; an X-ray picture showing in the usual position of a kidney stone a very definite shadow. Fortunately for the patient, her husband, who was a physician and very acute observer, was satisfied that whenever she had an attack there was a distinct small tumor in the region of the gall bladder. At the time he made the examination he thought she had a kidney stone, and that the stone in the shadow was in the kidney. On the evidence submitted by her husband she was operated upon in the region of the gall bladder and found a single stone in the contracted gall bladder. This stone contained a great deal of carbonate of calcium, throwing a shadow as distinct as any kidney stone he has ever seen. In one other case, in a rather thin individual, not emaciated, he found another shadow in exactly the position of a stone in the pelvis of the kidney. The evidence was in favor of gall stone attacks. The picture was one not accompanied with jaundice, except a very slight attack. However, there was such a typical picture, chills and fever, and pain referred to the region of the bile tract, with the absence of distinct kidney symptoms, that a diagnosis of stone in the common duct was made, and later it developed there was a single stone in the common duct. He called attention to the fact that these stones very seldom show in the X-ray. He has learned from this experience, especially in connection with the appendix, to take the X-ray picture of the case submitted to him as a case of appendix trouble to exclude the possibility of kidney stone.

Dr. Bevan then showed numerous skiagraphs illustrating the points brought out by him in his previous remarks.

The Diagnosis of Ureteral Stones.

Dr. M. L. Harris stated that with the possible rare exception of a stone forming about a for-

eign body or an obstruction in the ureter, all ureteral stones have their origin in the kidneys, whence they migrate to some point in the ureter, where they become arrested. Previous to the migration of a stone the patient may or may not have presented symptoms pointing to kidney trouble, but the act of migrating is almost always accompanied by excruciating pain, known as renal or ureteral colic. The pain does not usually cease suddenly, as when the stone drops into the bladder, followed shortly by its escape from the urethra, but disappears more gradually. The history of such an attack of pain is therefore the first symptom of importance in the diagnosis of ureteral stone. After the stone becomes lodged it may remain latent for an indefinite period, provided it does not completely occlude the lumen of the ureter so as to prevent the passage of the urine around it. More commonly the patient has recurring attacks of pain of varying intensity, and at variable intervals, similar to the original ureteral colic, or a more or less fixed pain or soreness at some point in the lumbar region or along the course of the ureter may persist. The urinary findings and other symptoms are such as are common to kidney stones, or a pyelitis, or ureteritis from other causes, and therefore in no way characteristic. Localized tenderness along the ureter, or an enlarged ureter, if detached, on palpation may have some significance, but are not conclusive. Stones lodged at the lower end of the ureter may be palpated at times through the vagina or more rarely through the rectum. With the exception of these latter cases a diagnosis of ureteral stone based on the symptomatology can never be more than presumptive, and previous to the advent of the Roentgen ray and of the ureteral catheter a diagnosis of a ureteral stone in any portion of the ureter, except the lower end, is almost never made except at an operation. With the aid of the X-ray stones were soon recognized in all portions of the ureter, and when a distinct, well-defined shadow was obtained in the course of this duct a diagnosis of stone was considered positive. The great value of the X-ray was well shown in one of the cases reported by the author. In this case the X-ray not only aided materially in the diagnosis, but by accurately localizing the stone, facilitated its removal. It should be remembered, however, that a skiagram is but a visible expression of the relative facility with which the X-rays are transmitted through the various substances which have been interposed. A shadow in the picture does not in any way define what the cause of that shadow was, but this must be determined entirely from collateral facts. A correct interpretation of the shadows was very important, yet this may be difficult or even impossible without a knowledge of all of the collateral facts pertaining to the particular case in hand.

Dr. Harris directed attention to the possibility of error in interpreting shadows which apparently lie in the course of the ureter, and particularly that portion of the ureter which is contained within the pelvis. He has had two interesting cases recently in which an error of

interpretation of the significance of distinct shadows in this portion of the pelvis was made. These two cases were cited in detail and showed how easy it is to make an error in diagnosis by depending on the X-ray alone in supposed ureteral stones. What the cause of these shadows was still remains a mystery. Whether they were due to phleboliths or to small sesamoids or spots of calcification in some of the muscles of the pelvis he is unable to say, but that they were not due to ureteral stones is certain, and that such shadows cannot by their appearance alone be distinguished from ureteral stones is equally true. These cases also teach us how such errors may be avoided in the future. When such shadows are found in this portion of the pelvis, with symptoms pointing to ureteral stone, the ureters should be catheterized in order to determine whether the shadow actually lies in the course of the ureter, and whether the catheter meets an obstruction at the point indicated. The tip of the bougie may be waxed, so that contact with a foreign body, such as a stone, may be recognized by the indentations made in the wax. It is not his intention to deprecate the value of the X-ray in this work, but to call attention to the fact that there may be other bodies in the pelvis capable of casting shadows which, from appearances alone, cannot be distinguished from shadows cast by ureteral stones, and that in some of these cases a correct diagnosis can be made only by the use of the ureteral bougie.

The Chicago Medical Society held its regular meeting March 1.

An Attempt to Use the Electric Conductivity of Urine for Clinical Purposes.

Drs. Gustav Kolischer and Louis E. Schmidt have tried to determine the functional capacity of the kidneys from a new point of view. They tried to make every kidney a standard unto itself. They investigated whether the secreting efficiency of normal and abnormal kidneys might be influenced in a peculiar and characteristic way, so the osmotic concentration of the urine voided before and after staining certainly ought to show marked differences. The results of their investigations so far seem to bear out these theoretical speculations. As the most sensitive test they resorted to the test of electric conductivity, and as a method of staining they selected hypodermic injections of indigo carmin. After the stain is brought into the circulation, and after the urine becomes colored, the urine of normal kidneys always shows a slight decrease of electric conductivity, which depression, however, will never exceed nine international ohms. In case urine simultaneously drawn from both normal kidneys shows different electric conductivity before staining, the decrease of conductivity appearing after staining is exactly the same in either specimen. Urine drawn from pathologic kidneys will always, after staining, show a decided increase of electric conductivity. The authors believe they are justified in saying that any increase after staining of electric conductivity beyond ten international ohms is characteristic of impaired health of the kidney. If this increase stays inside the limits of twenty ohms, this kidney may be considered as safe in

a surgical sense; that is it can reasonably be expected to be of sufficient functional capacity to attend to the eliminating process after its mate has been removed. Any kidney whose urine after staining shows an increase of electric conductivity beyond twenty ohms has to be considered as absolutely unsafe in a surgical sense. They expect to be able to determine by this method in advance whether a given individual will react as to his kidneys, favorably or unfavorably to the administration of a general anesthetic.

Diagnosis of Syphiloma of Kidneys.

Dr. R. R. Campbell read a paper on this subject, in which he stated that syphilis as an etiologic factor must be seriously considered in inflammatory kidney diseases. That such cases as syphilitic nephritis exist is doubted by some of the best authorities. He does not wish to insist that a syphilitic treatment should be instituted in such cases. Authorities differ, and some even advise very strongly against the use of mercury in these conditions. If there is a syphilitic process of the kidney it should be treated as such, just as syphilis involving any other structure is treated.

Reference was made to the review of the subject of syphilitic changes in the kidneys by Virchow in 1858, and also to the studies of Seiler on syphilitic gumma as early as 1881.

In individuals who have had syphilis and have lacked treatment altogether, or have had but insufficient treatment, syphiloma of the kidney must always be considered in the differentiation of obscure kidney troubles. These affections may be concomitant with other forms of kidney diseases, and it must not be forgotten that only one kidney is usually involved in a gummatous process.

The object of the paper is to point out the possibility of gumma of the kidneys, especially when dealing with "surgical kidney," and where the amount of blood and debris is large or small it should cause one to consider surgical interference.

As to the rôle that the minute examinations play, such as artificial injection of indigo carmine, the production of artificial glycosuria, inhibition of methylen blue, etc., this can only be surmised, as he knows of no case up to the present in which such findings are reported.

In establishing the diagnosis of syphiloma of the kidney it must be remembered that if the gumma or gummata are of large size the kidney with these irregularities might be palpated. There may be cachexia present. The patient may naturally have lost in weight. With all these signs and symptoms it becomes necessary to differentiate from a malignant growth. However, the indolent character and the benign course of such a tumor always speak for a luetic cause. Wherever these findings are present a nephrectomy must not be done until the possibility of syphilis has been excluded.

Discussion on the Papers of Drs. Belfield, Bevan, Harris, Schmidt and Campbell.

Dr. R. B. Preble: I feel that all of you will agree with me when I say it is a great pity that Dr. Schmidt felt himself called upon to

limit his paper to the few moments he gave to it, because he dealt with a matter in which we are all keenly interested, namely, the matter of determining the functional activity or capacity of the kidney in all cases where operative procedures on that organ are justifiable. All are familiar with the various methods that have been employed or recommended to determine the functional activity of either or both kidneys. You know also of the immense amount of work done on these lines, and yet not much progress has been made. In spite of cryoscopy, and in spite of all the work which has been done with reference to determining the excretory powers of the kidney, as shown by the excretion of methylen blue, we may say that so far as this work has yet proceeded very little real progress has been made. The same may be said with regard to the electric conductivity of the urine. However, the work which Drs. Schmidt and Kolischer have been doing would seem to promise something in the way of light on this most obscure and most important question.

There is one other thing which I had in mind to mention to-night, thinking that this subject was to have taken a broader aspect than it has taken, and that is something in regard to the essential characteristics of the pathological conditions of the kidneys suitable for operation. In other words, what are the essential characteristics of surgical affections of the kidney? There is a wide variety of conditions in the kidney which are justly submitted to operation, and there is scarcely any one pathologic process which may not affect the kidney and may not be justifiably operated on. We find operation justified for many circulatory disturbances, for certain inflammatory processes, for granulomata, for certain parasitic processes, and many neoplasms. But in all these conditions, no matter whether they are circulatory, inflammatory or neoplastic, it is essential that the process be a local one. So soon as the pathological process extends beyond the limits of the kidney and becomes a generalized process the renal affection is no longer suitable for a surgical procedure. For instance, carcinoma of the kidney, so long as it is confined to the kidney, is a surgical affection; but as soon as metastasis occurs it is no longer such. This, it occurs to me, is of some importance, not alone from this, but also from the opposite point of view.

If local processes in the kidney become unsuitable for operation as soon as they become generalized, it is reasonable to assume that a primarily general disease does not become operable because it localizes in the kidneys. This theoretical objection may be raised to the introduction of surgical procedures into the treatment of renal affections, which are an expression, not of some disease of the kidney, but of constitutional disturbance, as, for instance, nephritis. You will recall that last year we had a series of papers read before the Society in which this question was discussed—the surgical treatment of nephritis, and I am glad to say that almost universally it was

agreed that such a condition was not eligible for surgical treatment, and I believe that since that time experience has strengthened rather than weakened that conclusion.

There is one other condition which is frequently subjected to surgical procedure, and against which I must raise some protest, and that is movable kidney. An immense number of operations are being done for movable kidney, and I believe only a small percentage of those operations are in reality justifiable. Here also the rule outlined above will serve as a guide to the right conclusion. So long as the disturbances which result from abnormal motility of the kidney are confined to the kidney itself, operation is justifiable; but when the disturbance is constitutional operation is unjustifiable. What I mean by that is this: If, as a result of motility of the kidney, we have intermittent hydronephrosis, or we have paroxysms of pain, or albuminuria, with casts of blood in the urine, the operation is justifiable. But when we find a combination, as we so frequently do, of movable kidney, with hysteria and neurasthenia, and an operation is done with the idea of correcting a functional, nervous process, then I believe operation is not only unjustifiable, but should be absolutely condemned, and judging from the frequency with which I see women suffering from hysterical and neurasthenic conditions in whom an operation of that sort has been done, we ultimately arrive at the same conclusion in regard to fixation of the kidney in cases of hysteria and neurasthenia that we have reached, for example, in regard to the repair of laceration of the cervix or of laceration of the perineum for the cure of these same neuroses. I believe that a great many of the conditions which have been mentioned to-night by others and some which have been discussed by myself are operable, so long as they are local; but as soon as the disturbances or processes become generalized they cease to be remediable by operative procedures.

Dr. Carl Beck: The paper of Drs. Schmidt and Kolischer interested me because it touches some points which are very important for the surgeon. When the question arises whether we should or should not remove a pathologic kidney it becomes very important to decide whether there is another kidney, and if it is there, whether it is functioning or not. Cryoscopy has been considered one of the best means to determine that. Kummel, whom I saw demonstrate the experiment the first time, has been very enthusiastic about the results of his investigations in cryoscopy, but he himself and all the rest of the investigators have lost a good deal of hope that we are able to determine satisfactorily the function of the kidney by cryoscopy alone. The same is said of the phloridzin and the color tests, and we sincerely hope that Drs. Schmidt and Kolischer will solve this problem in their investigations. How important this investigation is I found out only a few weeks ago in a case which I will relate briefly, because I have used a method which I do not think will prove practical in every particular case, and which is more sur-

gical than a physiological method. I have a case at the hospital now of a woman with a tubercular kidney. She came with severe and profuse hematuria and intense pain. The hemorrhages pointed to the right kidney as the source. There was a tumor of the right kidney. The kidney was twice the size of the normal kidney, distended by fluid, and very tender. The woman had no symptoms of tuberculosis elsewhere, but the kidney was to all appearances, so far as clinical examination could show, either tubercular or a kidney containing a stone and pus. Catheterization of the ureters was impossible on account of local irritative conditions of the bladder. Inasmuch as the case was an urgent one, I decided to operate, and then, according to the findings, do what was indicated. I brought the kidney out upon the surface of the body fully and determined that there were two places which pointed to the presence of pus within the kidney. I opened these and characteristic pus (tubercular) was discharged. I opened into the pelvis of the kidney, and then the question arose, inasmuch as the larger portion of the kidney was diseased whether the kidney should be removed or not. As a cryoscopic examination, as well as other examinations, were not made, and I did not know whether the other kidney, if there was one, was normal or not, I decided to leave the kidney outside on the surface and to watch the other kidney and the secretions from it. I left the kidney outside of the body for eight days. I packed the bed of the kidney with gauze to keep it open in case I wanted to replace it if I found the other was not good. After a few days we catheterized a ureter, and found only one ureter accessible, and this was the ureter of the supposed healthy kidney. The urine of that kidney proved to be urine from a kidney that was thoroughly diseased, and at the end of eight days I replaced the kidney, after I had treated the abscesses of the kidney locally thoroughly, and now healing is taking place. This is the surgical test of the kidney. I could test the urine of each kidney separately without making use of the physiological tests otherwise indicated. I think such a procedure could be used in a number of cases almost in the same manner if we could bring the kidney out, separate it clear down, the pedicle containing nothing but artery and vein, and with simply clamping, take the pedicle out if we want to remove it, or replace it in case of local abscesses or ordinary wounds. At first I was afraid the stretching of the vessels or the dislocation might have a bad result; that I might have a hematoma or other conditions, but it did not seem to have any effect whatsoever on the kidney, although the displacement was considerable. The kidney itself seemed much better instead of worse from the displacement. The urine has since become normal; blood has disappeared, as well as pus and pain. A fistula still remains, although it is getting much better.

Dr. Joseph E. Smith: In regard to the matter of diagnosis of the kidney stones, in some of the skiagraphs passed around this evening there were various small objects that were marked

"not stones found at operation." I have observed in a good many skiagraphs of the pelvis that we get small, indefinite shadows opposite the spine of the ischium, and it seems to me the probable explanation is that they are small sesamoid bones that occur in that region. It is not an uncommon thing to find them in the skiagraphs of cases taken for other conditions in the hip joint or pelvis, where there are no symptoms of ureteral or kidney stone present, and they are decidedly misleading in a great many cases. They very much resemble small, round stones that might easily be supposed to be calculi in the lower end of the ureter.

In regard to the occasional mistakes that may be made in the diagnosis of stones in the ureter, it has been pointed out several times that other bodies occur in this region which may give shadows very much like those of ureteral calculi, and the explanation that has been offered is that they are either phleboliths that occur in the veins in that vicinity, or calcified lymph nodes. I do not know that any particular case has ever been demonstrated post-mortem where a shadow resembling a stone in the ureter has been shown to be due to a calcareous lymphatic gland; but such cases have been reported where shadows in that region have been shown not to be stones in the ureter, and I do not see any reason why a calcified lymph node might not lead to that conclusion. It has been suggested by various workers in this field that in order to avoid this source of error the ureteral bougie passed into the ureter will show that the shadow of the stone does not lie in the course of the ureter. Where this is possible this fallacy can sometimes be obviated.

In making kidney skiagraphs the essential thing is, first, to secure the necessary degree of penetration, and at the same time preserve the proper differentiation. We have to be guided by the thickness of the patient as to the degree of penetration required in any particular case, and the character of the tube we are using, whether it is hard or soft, determines whether it shall be a penetrating or a light that is not penetrating. In a thick patient it is necessary to have a higher degree of penetration, and in proportion as the degree of penetration increases the differentiation decreases. In all cases where the patients are sufficiently thin if good penetration can be secured with a low vacuum tube, thereby preserving the maximum differentiation, we can be more certain of the results.

Another faction that enters into the success of this matter in a large degree is the so-called diffusion of the rays. There is no doubt that every bit of tissue in the path of the rays becomes in itself a secondary source of radiation, and the more directions the rays take as they pass through the body of the patient, the greater diffusion we have, and therefore the more indistinct the image. Since the entire surface of tube that is used in producing light is more or less a source of rays, it is desirable to exclude all rays except those that come from the small center at the anode of the tube. To do this the tube can be enclosed in an

opaque shield, which serves as a means of protection to the operator, and at the same time it excludes all the extraneous rays that come from the surface of the tube, and gives a cone of light on which the rays are practically parallel. Then, in addition, if we place below the shield a large sheet of lead with an opening two or three inches in diameter, we can still further diminish the cone of light, and renders the rays more nearly parallel.

Dr. Alexander Hugh Ferguson: When I was asked to take part in this symposium I did not think I would be able to attend the meeting, but being here and having been asked to say a few words, I would like to remark, first, with regard to Belfield's paper, that I can look back upon a large number of cases of epididymitis whose course no doubt would have been shortened by early incisions, and I believe he has brought forward an advance in the surgery of the epididymis.

I have had considerable experience with kidney stones, and I can corroborate almost every word that has been said by Drs. Bevan and Harris. I had a very interesting case some five or six years ago, in which there were two small stones, one in the upper pole of the kidney and the other in the lower. The patient had many stones removed from the kidney by a surgeon in Omaha at two sittings previously. Were it not for the X-ray showing the locality of these small stones, I am sure that one of them would not likely have been found at the operation. I probed for a long time, and it was only after a good deal of difficulty I found the small stone and removed it. My experience with the X-ray in kidney stones convinces me that it is the best and most reliable single means we have of diagnosing stone in the kidney.

The joint paper of Drs. Schmidt and Kolischer has been exceedingly interesting and scientific, and it is truly to be hoped that something will be worked out relative to the functional activity of the kidney as to whether it will be operable or not. Even though something is accomplished along this line there may be a fallacy in this regard, that it may not prove to be as practicable as it is scientific. I mean by that statement that to-day we operate upon kidneys that we think are not performing their function properly, but when we open those kidneys their function is restored. Take the early cases of acute nephritis, or the cases reported in the last few years of anuria, in which there was almost complete suspension of the function of the kidneys, and we find their function was restored by operation.

I cannot take my seat, although it is a little foreign to the subject of this symposium, without referring a little to the great assurance with which the internist expresses his surgical views here taught. It is really refreshing for Dr. Preble to come forward and tell us that such and such a case is operable, and that such and such a case is not operable. I venture to say that Dr. Preble has never stood by the side of a case of interstitial nephritis, examined it carefully before and during operation, followed the case afterward, and seen the imme-

diate and remote results. His dictum does not settle the matter by any means, and I am sure that he has only voiced the vision of his own horizon.

Dr. David Lieberthal: I am familiar with the work of Drs. Kolischer and Schmidt, and believe it is in the right direction. Should these experiments not prove perfectly successful they will doubtless add to our knowledge of the functional disturbances of the kidney.

I was much interested in Dr. Campbell's paper. Syphilis in every stage may cause affections of the kidney. Syphiloma of the kidney is practically not diagnosed *intra vitam*, but is usually discovered at the post-mortem table. It is important to know that an affection of the kidney may also occur in the early stage of the disease, even at the beginning of the secondary symptoms, in the form of glomerular nephritis. Furthermore, we know that mercury, the most important drug in the treatment of syphilis, may cause irritation of the kidneys. When at that stage syphilis is diagnosed and the kidneys are found affected, it is either due to syphilis or to other causes, and in the latter case is either recent or of long-standing. Mercurial treatment will cure the kidneys if their affection is specific, but is apt to aggravate the condition is non-specific.

Therefore, the condition of the kidneys should be watched throughout the whole course, and the treatment regulated accordingly.

Dr. William T. Belfield: I am incompetent to criticize the work of Drs. Schmidt and Kolischer; yet I am more deeply impressed by its excellence than by anything we have heard here on the determination of renal activity.

I am one of the numerous objectors to the optimistic view that the X-ray is an infallible diagnostic aid in kidney and ureteral stones, as maintained by Dr. Leonard, of Philadelphia, and by Dr. Bevan. We cannot trust the X-ray positively or negatively, in spite of the very large amount of excellent work that has been done by it. We know that certain calculi escape the X-ray; on the other hand, as Dr. Harris' two cases have illustrated, the X-ray may show calculi which, on post-mortem, cannot be discovered. Whether these are sesamoid bones, calcified lymph glands, or phleboliths, is, of course, immaterial. I have in my hand three phleboliths as large as buckshot, which I picked up accidentally in anatomical work on the ureter and the vas deferens. These are evidently, from their looks and feel, lime calculi. They lay in a vein directly behind the ureter.

It is doubtful whether even a probe introduced into the ureter through the cystoscope would have determined that these were not ureteral stones, even though the probe failed to touch them.

The X-ray is valuable, but certainly not infallible.

Dr. Arthur Dean Bevan: With reference to the remarks made by Dr. Belfield, I would like to say that my discussion was limited to kidney stone. Dr. Harris and I had a definite understanding that I was not to touch on stone in the ureter. The points brought out by Drs. Harris and Schmidt were true. I have no doubt I

have seen twenty skiagraphs in which there was not the least bit of evidence of any kidney trouble or anything suggestive of kidney stone trouble. The statements which I made related entirely to stone in the kidney, and I am very glad Dr. Harris brought out the very important point of the difficulty of determining the exact character of these shadows in the pelvis. My own experience now comprises thirty to forty cases in which we have actually operated upon kidneys, where the question of kidney stone has been considered and determined by the X-ray. We have had but one failure out of this number of cases. Kummel had none. Mayo, who was here the other day from Rochester, told me that he has adopted the same technique we are following at the Presbyterian hospital, which for a long time was most unsatisfactory and difficult, has now become most satisfactory. I do not deny the possibility that there is a fair percentage of error, and this may be as high as ten per cent. I am perfectly willing to admit that there is a leeway of ten per cent; but, after all, what means of diagnosis in medicine have we that has not such a leeway? What means of diagnosis have we that is as accurate? My plea is that mistakes are made because the work is not done well and the skiagraphs are not well interpreted. I am willing to admit that if the work is done by the best men and in the best way there will be a small percentage of error. Nothing is infallible. The position should be taken that the X-ray is one of the most accurate means of diagnosis that we have in medicine, and that it should be properly employed and correctly interpreted.

Dr. Alfred Parker: In regard to Dr. Belfield's paper, I think we are too conservative in the treatment of pyogenic infections of the male genital organs. In pyogenic infection of any other organ we would not wait as we do in cases of epididymitis and pus infection of the seminal vesicles, but incise, as by waiting and giving nothing but symptomatic treatment, as we usually do in epididymitis, we let the disease make headway, and finally we get the bad results which have been referred to. If we would follow the suggestions of Dr. Belfield and drain each case of epididymitis, in my opinion, some of the consequences we see at the present time would not occur.

Dr. Gustav Kolischer: After the flattering remarks that have been made I would like to say a few words regarding early work with the X-ray. The first men to recognize the necessity that something should be added to the usual X-ray work in trying to locate a kidney or ureteral stone were Dr. Louis E. Schmidt and myself, and about four years ago we made a preliminary report before this Society pointing out this factor and showing skiagraphs which were taken. We were the first to suggest the introduction of lead wires as substances which would show up in an X-ray picture in the ureters and in the kidneys, not only for the purpose of diagnosing ureteral stone, but we showed by pictures and by reports of cases that it is very important to do that in a case of kidney stone, because it is very easy after such a picture is taken to de-

termine whether the stone is located in the pelvis of the kidney or in the parenchyma. One case, which occurred in the practice of Dr. Schmidt, bears this out. The patient was a man, who had stone in the kidney. He had symptoms of stone in that organ. The skiagraph showed a shadow of a stone. The patient was operated upon by an able surgeon, who could not find the stone. We then took a skiagraph, after a lead wire was introduced into the ureter and into the renal pelvis. The stone was at a considerable distance from the end of the lead wire; consequently the stone was not in the pelvis of the kidney. Guided by the picture and the lead wire, the operator now reached the stone by the first incision, because he knew then where to look for it.

This X-ray work has been taken up to some extent in France and Germany; but we have not seen many reports so far. Dr. Schmidt and myself are entitled to the credit for priority in this work, although we are practicing in Chicago.

As to tests for the electric conductivity of the urine, I want to say this: There are two objections which might be raised, even admitting that the principles of this method are true. One is the objection raised by Dr. Ferguson, and about which there is some misunderstanding. He said the test will not be as practicable as it is scientific, because it will contradict certain principles which are made by surgeons who operate for nephritis, the so-called Edebohls operation. Dr. Ferguson is mistaken in that direction. We claim that if our test is true we established the fact that there is a one-sided nephritis. There are cases where only one kidney is inflamed, and there can be only one real indication for operating on nephritis, namely, when only one kidney is involved. If we have bilateral nephritis, then, of course, the objections raised by Dr. Preble hold true.

Another objection raised against this method was that it necessitates the catheterization of the ureters to obtain the urine separately from each kidney. That is no objection whatever. Catheterization of the ureters is not reserved for a few men. There is no mystery about it. Some are more expert in doing it than others. While it is true that in certain cases it is difficult or impossible to catheterize the ureters, there are other methods which fail in other cases. There is no uniformly successful diagnostic method. It does not exist.

I am pleased to state that a number of men whom Dr. Belfield, Dr. Schmidt and I have heard sneer at the use of the cystoscope are now using it with satisfaction. They have become convinced of its value in catheterizing the ureters.

JOINT MEETING OF THE CHICAGO NEUROLOGICAL AND CHICAGO MEDICAL SOCIETIES, HELD MARCH 29, 1905.

The President of the Chicago Neurological Society, Dr. Harold N. Moyer, in the chair.

Symposium on Exophthalmic Goitre.

Dr. L. F. Barker opened the discussion on the symposium with a paper on

The General Considerations.

He says the disease has been named after in-

vestigators in several countries. Thus in English textbooks it is frequently referred to as Graves' disease; in Germany, as Basedow's disease; in Italy, as Flajani's disease. But the syndrome was undoubtedly very well described by Parry earlier than by any of the authors mentioned, and strictly speaking we should, therefore, if we refer to the disease under the name of any one man, call it Parry's disease.

The affection has been treated monographically several times. The best monograph on the subject is, he thinks, that of Moebius, published in 1896. There are but few facts known concerning the disease which are not dealt with in his treatise, and the speaker has drawn liberally upon it in the preparation of this review.

During the last fifty years knowledge of the disease has increased with great rapidity. Everyone has become familiar with its outspoken forms, and the recognition of more obscure types has been rendered easier. The rarer symptoms of the disease have been carefully investigated; numerous new signs have been discovered; and the significance and frequency of many of the phenomena have been established.

While the nature of the affection is not yet wholly clear, great strides have been made toward an understanding of it. The theory that a disturbance of the thyroid gland is responsible for the symptoms of the disease is now the dominant one, but, as will be pointed out later, this view has not met with universal acceptance, and there are some points difficult to reconcile with any of the theories yet propounded.

In the treatment of exophthalmic goitre a great deal has been accomplished, really much more than is generally recognized. For the prevalent opinion among physicians and the laity seems to be that the disease is incurable; whereas the literature shows, and the experience of men who have dealt widely with the disease proves, that a good many cases get well. Some patients apparently recover spontaneously; others, and in considerable numbers, after special treatment, medical or surgical, or both.

With regard to the etiology, it is known that the disease occurs nearly five times as frequently in the female as in the male; that it is commonest in early life, and especially in the third decade; that it has a tendency to appear in the so-called neuropathic families; that many cases of the disease may occur in one family; that it often develops after emotional shock or prolonged emotional disturbance; that occasionally it appears as a sequel of some infectious process; and, finally, that, as far as has yet been made out, climatic and terrestrial conditions play no important role in its causation, though it would appear that it is rather more common in districts where ordinary goitre is prevalent. The disease has been met with in lower animals, in the dog, in horses and in cattle. Whether it is more frequent now than formerly cannot be definitely stated, but it seems rather strange that so striking a symptom-complex as typical exophthalmic goitre presents should not have been more commonly recorded in the older medical literature.

As the cardinal symptoms of the disease are usually described, we have the tetrad-tachycar-

dia, goitre, exophthalmos, and tremor. In well-marked cases all these symptoms may be present, but in undoubted instances of the disease, one, two or even three of them may be absent. Some have even gone as far as to diagnose the disease in the absence of any one of these four symptoms. As a consideration of the atypical forms is to be discussed by Dr. Mettler, he would say nothing further on this phase of the subject.

Aside from the thyroid gland, it is the circulatory system, the nervous system, the eyes and the skin, the functions of which are especially disordered, though there are also evidences of disturbed activity in still other parts of the body which must be referred to.

One of the circulatory disturbances, the tachycardia, is usually the first symptom to be manifest. It is rarely, if ever, absent in the disease, and the character of the symptom affords perhaps more information than that of any other regarding the course of the disease. The heart beats more rapidly and more powerfully than normal, and the patient has a disturbing subjective sense of palpitation. The tachycardia may be paroxysmal at first, but later often becomes continuous. Indeed, tachycardia unrelated to disturbances of digestion or to organic disease should always excite suspicion of the possible existence of Parry's disease. Occasionally murmurs may be heard over the heart, especially at the base. Angina pectoris is not infrequently encountered. An interesting symptom on the part of the circulatory system is the marked pulsation of peripheral arteries, which may be limited to a group of vessels, most often the carotids; or it may be general; often one set of vessels will pulsate more at one time and another set at another; the throbbing may even be unilateral. In severe cases actual hemorrhages from small vessels may occur.

The enlargement of the thyroid, in Parry's disease, is worthy of special consideration, for in the first place the Parry syndrome can appear after an ordinary goitre, though in many instances the goitre develops along with the other symptoms. This fact has led Moebius to divide the cases of Parry's disease into two groups: (1) The primary cases, and (2) the secondary cases. In the primary cases the struma is usually soft, the gland may not be very much enlarged and often the right lobe is more increased in size than the left. Large vessels cover the gland. The carotid pulsation is transmitted by it; a distinct thrill can often be felt on palpation and on listening to the tumor a systolic blow may be heard. Guttman distinguishes an arterial bruit from a venous bruit, and believes that these sounds, if present, are pathognomonic for the disease. The goitre develops, as a rule, very slowly, but in some cases it grows with great rapidity, attaining a considerable size in a few days, or even within a few hours. It must be remembered that the parenchymatous changes in the gland characteristic of the disease may be present in the absence of goitre, and, further, that the goitre, at any rate in the primary cases, may be

largely due to the dilatation of the blood vessels of the gland, for the gland is often markedly collapsible after death. Careful studies of the histological appearances of the gland have been made by Greenfield, Renaut, Brissaud, and others. There is a peculiar hyperplasia of the gland acini. Colloid is usually absent. According to Renaut, the lymph vessels in the central part of the glandular lobules are obliterated, while those at the periphery, the interlobular lymph vessels, are excessively distended. He believes that the absence of colloid is due to its transformation into a substance which he calls thyromucoïn.

Many of the symptoms of exophthalmic goitre are directly referable to a disturbance of the functions of the nervous system, and it is not surprising that many of the theories of the disease make it neural in origin. The psyche of the individual is rarely normal. Increased irritability is often one of the first signs. I have been much surprised in looking over the literature to observe how frequently cases of exophthalmic goitre have been associated with definite psychoses, with mania, with melancholia, and with other forms of insanity. Even when no definite psychosis exists, it is not uncommon to find patients over-cheerful or excessively depressed. Insomnia is a common symptom. Flushings of heat are complained of.

Perhaps the most important nervous symptom is the tremor. It has been carefully studied by P. Marie, and is now regarded as a very constant phenomenon, though it undergoes marked variation in degree and continuousness. The tremor is usually fine and rapid; the rhythmic oscillations number from eight to ten per second. Among other nervous symptoms, tonic spasms, sometimes resembling those of tetany, and epileptiform attacks, may be mentioned. A symptom which is not at all uncommon is marked muscular weakness, which may become so exaggerated as to render the patient bed-ridden. Actual paralyses are described; Charcot called attention to the paraparesis which may occur, and German writers describe what they call the "Basedow paralyses." As a rule, the tendon reflexes are not markedly altered, but they may be increased or diminished. It is a striking fact in pathological anatomy that despite the marked clinical symptoms referable to the nervous system, actual demonstrable lesions are rarely to be met with. It would appear that the poison in the disease, in acting upon the neural structures, is able to destroy functions without leaving behind indications of its action discoverable by our present histological methods.

The eye symptoms of the disease are among the most characteristic. The exophthalmos appears to be due chiefly to the dilatation of the blood vessels of the orbit, though in long-standing cases an increase of the adipose tissue may be partly responsible therefor. The symptoms known by the name of von Graefe is very often present, though not constantly. It may easily be overlooked unless tested for carefully, and he hoped Dr. Gradle would describe in detail the best method of eliciting the sign. Stellwag's

symptom, the widened lid slit and the infrequent winking, is one of the earliest and most constant signs of the disease, and together with the exophthalmos causes the goggle eye. Moebius' symptom, insufficiency of convergence, best brought out by telling the patient first to look at the ceiling and then at the end of his nose, is an important accessory sign, though not pathognomonic. With the insufficiency there is no diplopia, though the patient may experience a feeling of tension. Actual eye muscle paralyses are rare, but do occur, and may be associated with paralyses in the domain of the fifth and the seventh cerebral nerve. Tremor of the eyeball, tremor of the eyelid (Rosenbach's symptom), excessive lacrimation, are among the other occasional eye symptoms. He mentioned these only, as Dr. Gradle was to take up the ophthalmological side of the clinical picture in detail.

On the part of the skin, increased sweating is the most important symptom. The increased moisture due to it appears to be responsible for the lessened resistance of the skin to the passage of the electric current (Vigorous's symptom). The skin may be pigmented, sometimes as markedly as in Addison's disease. There may be circumscribed edema; urticaria factitia is not uncommon. Occasionally marked trophic disturbances, including falling out of the hair and scleroderma, may be met with, especially where exophthalmic goitre is complicated by myxedema.

The symptoms referable to other parts of the body may be dismissed in a few words. Diarrhoea is not infrequently a troublesome symptom. According to the researches of F. Mueller, metabolism must be profoundly altered, for in spite of the bulimia usually present in this disease, the patients emaciate rapidly and the nitrogen output exceeds the intake. Transient fever is very often present, even in the mild cases, but a high temperature, or one lasting over a long period, is seldom met with except in the severer forms of the malady. Gowers has called attention to the enlargement of the lymphatic glands, which may be present, and Markham asserts that a persistent thymus may nearly always be found at autopsy. A sign contributed by an American clinician, the so-called Bryson's sign, consists in the slight expansion of the thorax on inspiration. It has been commented upon, among others, by Patrick.

Four principal theories of the disease have been put forward: (1) That it is due to disease of the sympathetic nervous system; (2) that the seat of the malady is in the medulla oblongata; (3) that it is primarily a disease of the thyroid gland, and (4) that it is a neurosis.

The tachycardia, the throbbing and dilatation of the blood vessels, the vaso-motor and secretory disturbances generally, and the exophthalmos naturally have directed the attention of investigators toward the sympathetic nervous system. The fact that some of the symptoms point to paralysis of the sympathetic, and others to irritation, need not necessarily militate against the view, since it is common in neural lesions to meet with such mixed symptoms.

That the medulla oblongata is the seat of the

disease is a theory founded on very few objective facts. There have, it is true, been found occasionally at autopsy slight lesions in the medulla oblongata, such as echymoses in the floor of the fourth ventricle, partial agenesis or atrophy of the tractus solitarius, but nothing of a pathologico-anatomical nature has ever been observed, which could satisfactorily account for Parry's syndrome. It was Filehne's experiments, he takes it, upon the corpus retiforme which lent most support to the bulbar theory. He produced some of the symptoms of the disease, and his experiments have been more or less confirmed by other observers. The work should undoubtedly be further followed up. The well known fact that in strong emotional excitement, for example, in horror, the eyes protrude, and are fixed upon the horrible object, the heart beats fast, the individual breaks out into a sweat, and sometimes even the thyroid is temporarily enlarged, has been used to favor the bulbar hypothesis, it being assumed that there must be some center in the medulla oblongata, stimulation of which calls forth the combination of symptoms mentioned.

The dominant theory at the present time is that in which a primary disease of the thyroid gland is made responsible for the affection. Since 1873, when Gull described myxedema, and in 1878, when Ord showed that the thyroid is atrophied in that disease, progress concerning the relation of the thyroid gland to the rest of the organism has been making rapidly. In 1882 Reverdin demonstrated that on excision of the thyroid in animals a myxedema operativum develops, the condition subsequently designated by Kocher as *cachexia strumapriiva*. Later Murray discovered that the feeding of thyroid substance to myxedematous patients or to animals with *cachexia strumapriiva* would cause the symptoms to vanish, whereupon the belief seemed well founded that myxedema is due to diminution or loss of activity of the thyroid gland. Now histological examination and macroscopic observation have shown that in exophthalmic goitre we have to deal, as a rule, not with an atrophy, but with an hypertrophy of the thyroid gland, and in 1886 Moebius advanced the hypothesis that Basedow's disease is the result of a pathologically increased activity of the thyroid. He suggested that in exophthalmic goitre we have to deal with a primary disease of the thyroid, as a result of which a secondary intoxication of the rest of the body occurs, giving rise to the other symptoms. He urged that since the disease is a form of goitre, it is easy to understand the part played by heredity, the predominance among females, the influence of disease of the sexual organs, its occurrence along with other forms of goitre, the occasional transition to myxedema and the success of operative treatment. It has for some time been asserted that the feeding of thyroid glands in excess may produce some of the symptoms of exophthalmic goitre, though not all of them. Experiments connected therewith have, it is true, caused much discussion. Buschan declared that he took a large number of thyroid tablets without toxic effect, and Gregor reports

prolonged feeding of idiot children with thyroid substance without the production of Basedow's symptoms. On the other hand, Notthafft records a case where actual exophthalmic goitre developed after the ingestion of 1,000 tablets, and Oppenheim tells of an instance in which a woman receiving nine tablets per day to combat obesity, became the victim of Basedow's disease. The fact that exophthalmic goitre is occasionally associated with myxedema would seem to contradict Mobius' hypothesis, for according to his first conception of the disease myxedema and exophthalmic goitre are the very antithesis of one another, the former being due to an atrophy of the gland, with loss of function; the latter to an hypertrophy of the gland with increase of function. Mobius, however, does not regard the simultaneous occurrence of the two diseases as inconsistent with his theory since, as he now conceives of exophthalmic goitre, there is along with the early hypertrophy and hyperthyroidization a perversion of function, the so called dysthyreosis. This could easily go over in late stages of the disease into athyrea.

Modern therapeutic measures have been largely based upon the thyroid theory and the results of therapeutics have been adduced in support of it. There is no gainsaying the fact that the results of partial strumectomy indicate that the successful removal of a portion of the thyroid gland can lead to pure or to definite amelioration of the condition. The statistics of Heydenrich, Starr, Rembach-Mikulicz and Kocher are very interesting and convincing. Again, the reports of the French surgeons, especially those of Chipault and Jonnesco who resect the sympathetic on one or both sides in order to affect the thyroid secretion are very suggestive. The treatment by an antithyroid serum appears to have given in some cases remarkable results. On the theory that the thyroid secretion normally neutralizes certain general metabolic poisons in the body, Mobius and others conceived of treating cases of exophthalmic goitre in which there is presumably an excess of thyroid secretion in the body, by introducing subcutaneously or by the mouth the serum of thyroidectomized animals. It was hoped that the non-neutralized general metabolic poisons of such animals would nullify the toxic effect of the excessive thyroid secretion. Merck's antithyroidin, Burghardt and Blumenthal's "rodagen," Hallion and Carion's glycerin extracts of the blood serum, Vallet and Enriquez's serum, and Lanz's milk of thyroidectomized goats—all are administered on this principle.

The theory that exophthalmic goitre is primarily a neurosis, first championed by Charcot and his pupils, still has supporters among the ablest men of the profession. A survey of the whole subject makes the speaker personally unwilling for the present to deny it. The history of the affection, its etiology, its complications, the spontaneous cures which occur, the remarkable influence at times of suggestion, all make one think of a neurosis. Undoubtedly, the function of the thyroid is gravely altered

in the disease, but those who hold to the neurosis theory look upon the thyroid change as secondary to a primary nervous disease. But such an assumption is far from satisfying, for one should have then to seek the cause of the neurosis. The fact is the pathogenesis of exophthalmic goitre is still wrapped in mystery.

As to treatment, experience has shown the great importance of general measures; complete rest for a time, fresh air, careful diet, mild balneotherapy, all are useful. He personally favors rest, isolation and systematic psychotherapy as a routine treatment. In cases which do not respond to this or to antithyroid therapy, operation may be considered, but if it is to be done, it should be undertaken before marked cachexia develops, and before the heart is too seriously diseased. Before any safe conclusions can be drawn regarding any form of treatment, a large number of cases should be observed over long periods. Results so favorable as to be startling have been obtained from the most diverse forms of treatment, even from feeding thyroid as well as from antithyroid medication.

Dr. Mettler's paper will be found on page 391.

Ocular Symptoms of Graves' Disease.

Dr. Henry Gradle discussed this phase of the subject, saying that in well marked Graves' disease the patient has a wild, staring look, amounting to even an expression of terror. This is caused by protrusion of the eyeballs together with retraction of the upper eyelid, whereby some of the sclera is exposed to view above the cornea. The widening of the lid aperture is peculiar to this disease, and does not accompany protrusion of the eyeball from other causes. The exophthalmos varies in degree. It may be so pronounced that the lids cannot be closed. Even partial forward dislocation of the eyeball has been seen on attempting forcible closure of the lids. On the other hand, the exophthalmos may be inconspicuous or not alike in the two eyes. One-sided exophthalmos is not excessively rare. Indeed, the diagnosis of Graves' disease is occasionally certain, even without exophthalmos, or the latter may develop after the other cardinal symptoms have existed for a while. Conversely, protrusion of the eyes or even of one eye only, when accompanied by the characteristic retraction of the upper lid justifies the diagnosis of incipient or incomplete Graves' disease, even though goitre and heart symptoms be absent.

The retraction of the upper lid exposing the sclera to an abnormal extent is perhaps more characteristic of Graves' disease than mere protrusion of the eye. It is less often absent than the exophthalmos, and, like the latter, it is occasionally, though rarely, one-sided. In rare instances it is present without exophthalmos. At times the lower lid, too, seems slightly retracted. The retraction of the eyelid is often called Stellwag's sign, but not properly so, for it has been described previously. Stellwag really was the first to call attention to the infrequency of winking movements of the lids in this disease.

The exposure of the sclera is exaggerated when the patient looks downward. In the nor-

mal person the downward motion of the eye is accompanied by dropping of the upper lid, so that nothing above the upper corneo-scleral junction is exposed to view. Von Graefe pointed out that in most instances of Basedow's disease the upper lid does not follow the downward motion of the eye, but lags behind, and hence looking down intensifies the strange expression of the patient. Von Graefe's symptom is not constant.

Pigmentation of the skin, resembling the bronze color of Addison's disease, has been noted especially by Drummond, on various areas of the body and also around the eyes. Jellineck has lately again referred to the diffuse brown coloring of the skin of the eyelids, the upper more than the lower, as an early, though not constant and sometimes evanescent, symptom in exophthalmic goitre.

Moebius has observed insufficiency of the converging power of the eyes as a fairly frequent occurrence in Graves' disease. On following an object approaching the face, one eye will cease converging and will deviate outward when the object is within some five to eight inches, instead of the normal near point of convergence of about three inches. The patient may in consequence complain of fatigue of the eyes when doing near work.

Pulsation of the arteries of the retina has been described by Becker as common in this disease. Other observers have not seen this pulsation as often as Becker.

The protrusion of the eyeball is partly due to increased vascularity of the orbit, as it always diminishes after death. In some autopsies the eyeballs, prominent in life, were even found receded to normal position, and no anomalies were observed in the orbit. In other post-mortem records the exophthalmos was explained by the increased amount of fat found within the orbit. The ocular muscles were infiltrated with fat and the optic nerves elongated.

The retraction of the upper lid can be imitated by the action of the orbital muscle of Mueller under the influence of the stimulated cervical sympathetic nerve. In man, its condrooping of the lid, is observed when the sympathetic has been paralyzed by any lesion. Yet in an autopsy of Drummond's, no Mueller muscle could be found at all on dissecting the orbit.

When recovery occurs in this disease, either spontaneously or under treatment, the eye symptoms can disappear completely. Some instances have been observed, however, in which a slight degree of exophthalmos existed after apparent recovery from the other manifestations of the disease. If the disease continues without improvement, there is no reason to fear any eye complications or sequels except danger to the cornea in relatively rare instances. This relatively favorable prognosis was particularly emphasized at a discussion on Graves' disease before the Ophthalmological Society of the United Kingdom, in May, 1886, in which probably the largest collected experiences of the world were brought out. A few exceptional cases in which optic neuritis, optic atrophy, or

ocular palsies have been observed must be regarded as coincidences of separate lesions in neuropathic subjects.

When the gaping lids afford insufficient protection to the exposed cornea, ulceration of the latter may take place. This does not seem to be a frequent occurrence, especially in recent times. Personally, the author has seen one instance of it which proved manageable. It was mentioned in the earlier German literature, and seems to have been observed most frequently in the case of 'elderly' men, in whom the entire prognosis is more serious than in woman or in general in younger people. It can be guarded against or made to heal when not too far progressed by a protective bandage or operative closure of the gaping lid aperture.

There is a single case on record by Dor, of the occurrence of conical cornea in a patient with Graves' disease. The causative relation of the latter to the stretching and deformity of the cornea was suggested to Dor by the unusual improvement of the kerato-conus in both eyes, only one of which had been operated upon, when the patient recovered from the goitre under the administration of thymus. It has been the author's fortune to have seen recently a similar coincidence of these two obscure conditions—exophthalmic goitre and conical cornea.

The Serum Treatment of Exophthalmic Goitre.

Dr. Harold N. Moyer said that until the last few years the obscurity in which we labored in regard to the etiology and pathological changes responsible for the symptom-complex of Graves' disease precluded all possibility of adopting any rational method of treatment for this affection. Digitalis, strychnia, belladonna, the bromides, rest cure, massage, electricity, and the numerous other remedial measures have all failed in the majority of instances to produce any material effect upon the course of the disease. Since Moebius, Ballet and Enriquez and other investigators conceded that exophthalmic goitre was due to a functional derangement (an excessive or perverted secretion) of the thyroid gland, considerable progress has been made in the treatment of this affection. If the disease be the result of a too abundant or an excessively toxic secretion of the thyroid gland, the only rational form of therapy consists either in checking this secretion or else in neutralizing the toxic products thrown into the blood stream. The first of these alternatives was beyond our control, but, as the thyroid secretion is perhaps normally neutralized by certain antibodies present in the blood, the serum or blood of animals from which the thyroid gland had been removed and in which these anti-bodies had been allowed to accumulate for some time, should prove capable of neutralizing the excessive or perverted secretions causing Graves' disease.

The first experiments conducted along these lines were undertaken independently of each other by Ballett and Enriquez in Paris and Lanz, in Amsterdam. The former used the serum, the latter the milk of thyroidectomized animals. The results obtained by either method were very encouraging. Further experiments

along these lines were conducted by Burghart, Schultes, Goebel, Moebius, and others, some using the milk, others the blood of thyroidectomized animals. The same properties which were found in the blood and serum proved to be present also, although in not as great a concentration in the milk of these animals. The latter was preferred by some experimenters because it proved less expensive than the pure sera. The serum was at first administered subcutaneously, but as it was found that the same results could be obtained by using slightly larger doses per os, this latter method was considered more desirable. Since the results of the investigators above referred to have been published, there have appeared occasional articles, especially in the German medical journals, reporting cases treated by the use of preparations derived from thyroidectomized animals.

E. V. Leyden, in the *Medizinische Klinik*, Dec. 1, 1904, in an article entitled "The Organotherapy of Graves' Disease," gives a comprehensive historical review of the evolution of these products and reports a few cases successfully treated by the milk of thyroidectomized animals.

H. Hempel and K. Thienger both report favorably upon the use of Moebius' anti-thyreoid in serum, as prepared by Merck and Co. The harmlessness of all these preparations is self-evident, and all reports unanimously attribute to them much therapeutic value in cases of exophthalmic goitre. Almost without exception the rapid pulse rate, the palpitation, tumultuous and irregular heart action, are much improved. Vertigo, cyanosis, precordial distress, and other annoying symptoms due to the cardiac derangement disappear. The restlessness, insomnia, irritability, rhythmic tremor and other nervous and motor disturbances characteristic of the disease are greatly relieved, changing in a short time a condition of pitiable distress into one of comparative comfort. In most all cases a marked effect is noted upon the appetite, the weight increases, while the circumference of the neck decreases in those cases where glandular enlargement is present. In fact, the action of these remedies in cases of exophthalmic goitre seems almost a specific. Whether the prolonged exhibition of these preparations will eventually produce retrogressive changes in the gland or correct the deranged secretion, thus producing complete and permanent cure, remains still to be proven.

The new preparation—thyroidectin—is derived from the blood of thyroidectomized animals. In the preparation of these capsules, not only the serum but the entire blood has been utilized. It forms a reddish-brown powder, readily soluble, non-toxic, unirritating to and rapidly absorbed from the stomach. It is put up in five grain capsules, of which one or two are administered three times a day, according to the needs of the individual case. This remedy has fairly passed the experimental stage; it has been placed in the hands of prominent neurologists in this country, who are careful observers, and have testified to the fact that it possesses at least the greatest palliative value in the treatment of exophthalmic goitre.

Although thyroidectin is recommended especially for the treatment of exophthalmic goitre, it may also prove of value in various nervous disorders of obscure etiology, more or less closely related to Graves' disease, although the author has no actual data on the use of the preparation in these conditions.

A preparation similar to thyroidectin has been in use on the continent for some time. Dr. S. Christens has used milk (rodagen) and serum of thyroidectomized goats, but for the last four years has confined himself to the use of blood tablets prepared in the following manner: The blood of a thyroidectomized goat is distributed in thin layers in shallow dishes, dried in an incubator at body temperature, powdered, some gum added, and made into 35 cgm. (5 gr.) tablets. These tablets proved readily soluble in artificial gastric juice. Christens has treated up to this time 18 cases, all of which, with the exception of a few which were treated only a short time, were considerably benefitted. He claims that in this specific organotherapy we possess a valuable palliative therapeutic aid in the treatment of Graves' disease, which should be resorted to in all cases.

Personal Experience With the Serum Treatment in Exophthalmic Goitre.

Dr. Sydney Kuh discussed this phase of the subject. He reported 11 cases of exophthalmic goitre, of whom one was treated by the administration of the serum of the thyroidectomized animal furnished by Merck, while in other cases either the liquid or the desiccated serum furnished by Parke, Davis and Co., was given.

His conclusions are as follows: His experience has not been sufficient to justify him in making any statement as to the curative effects of the serum. He believes, however, that he is justified in saying that, it is an excellent palliative, at least; that it is not an infallible remedy is very probably true. Amongst the 11 cases there was one in which the effect of the treatment was temporary only, and another in which there was possibly no effect at all. One thing was very striking, and that was the marked and rapid improvement in the subjective condition of most of the patients. Within a few days after taking the first dose of the serum they would report a change for the better. The remedy influences the pulse probably as much as anything that is employed in the treatment of tachycardia in exophthalmic goitre; it increases the appetite and decreases nervousness. It has, if one may judge from the series of cases reported, a pronounced tendency to increase the weight. Theoretically, it seems hardly probable that the results from the serum should be permanent. One perhaps may expect that after some time a smaller dose may suffice, that perhaps an intermittent treatment only may be required. In one case, the first one reported, the patient has been without serum now for quite a long period—for approximately two and a half years, and has remained in excellent health all the time, but it seems doubtful whether she will remain in that condition unless she occasionally takes a few doses of the serum.

Two Severe Cases of Exophthalmic Goitre.

Dr. Charles L. Mix said he has had two very pronounced cases of exophthalmic goitre since Dr. Moyer put the serum into his possession. The first of these was a woman, who was in the Mercy Hospital for quite a period, with no diagnosis. Her case was regarded as a peculiar one. It was recognized that the heart was dilated, but further than that, and further than the neurasthenic and hysterical symptoms, nothing positive was made out. When he returned from his vacation in August, or September, the interne showed him the woman, and after a while the speaker recognized the case as one of exophthalmic goitre. He showed her to Dr. Moyer, who bore witness to the exquisite von Graefe's sign which was present. In fact, Dr. Moyer told him that it was one of the best he had ever seen in any case. The patient's pulse ranged from 120 to 130; it reached even 140.

As to the *modus operandi* of this serum, the theory of Moebius is very simple. Myxedema and exophthalmic goitre are antipathal diseases. Myxedema is due to a diminution in the proper secretions of the thyroid gland, and atrophy possibly of the glandular tissue, while exophthalmic goitre is due, according to the theory of Moebius, to an excess of secretion or of some substance which circulates in the blood and has some definite purpose. In the case of myxedema it is necessary to give patients the thyroid gland, to introduce into their bodies or tissues substance they need; and, conversely, in a case of exophthalmic goitre it is necessary to take out of the body of the individual those substances which are poisoning him or her, as the case may be. This we may not be able to do, but these poisonous substances can be neutralized, and the question is how to make the neutralization possible. The easiest way, according to Ballet, of Paris, and Moebius was to remove the thyroid gland from an animal, and the animal would acquire myxedema. By giving blood serum to this myxedematous animal, to a person with exophthalmic goitre, one would simply add minus 1 plus 1 and get nothing. That is the way the thing practically works out.

In this case this woman weighed from 22 to 30 pounds less than she does at the present time. She was toxic in the ordinary sense of the word. One symptom characteristic of exophthalmic goitre is myasthenia. All of these individuals are weak. There may possibly be some relationship between myasthenia gravis and the thyroid gland, or possibly the relationship is one entirely of the muscles. But in this particular case the woman, who was bedridden, who had to give up doing housework and had to go to a hospital, to remain there for weeks in bed, was taken by a visiting nurse to Grove House, and is now working there in a laundry. She has gained forty pounds since she has been in Grove House, and her pulse ranges in the nineties at the present time. She is working for her living, and can work satisfactorily for a time. In addition to the improvement in tachycardia; in addition to the gain in weight, and in addition to the gain in

strength, the doing away of myasthenia, we have a very pronounced effect also in the condition of the thyroid gland. The neck has diminished materially in size. The heart also has decreased in size materially.

The other case is one very much worse than this. There is no particular harm in mentioning names. I will say, that Dr. Doering saw this woman and said he could not do any more for her. He gave her up. Dr. Murphy saw the woman and gave a similar prognosis. Dr. Herrick also saw her, and told her he could do nothing for her. Dr. Babcock, who saw her, said it would be impossible practically to do anything for her. Why? Because she had reached the stage when the heart was giving way, when edema was rapidly appearing. She had very marked ascites. The girth of the navel was 37 inches. Her legs were excessively edematous. Her heart was a beautiful example of delirium cordis. The pulse rate ranged between 140 and 150; the neck measured $14\frac{1}{2}$ inches in circumference. She was 20 pounds under weight, but after the disappearance of the ascites she gained 20 pounds. At first she refused to take serum, but she was finally induced to take it, and took it in doses of 2 c.c. three times a day, which was afterwards reduced to 1 c.c., three times a day, and then the serum was abandoned altogether, and dry serum was given. The other case took the dry serum from the start. She was given thyroidectomized serum, or the serum from a thyroidectomized horse was injected, and the patient grew worse, so that she would have nothing to do with horse serum. Goat serum proved to be her salvation. After taking it during the winter, the patient was able to come to the speaker's office, during which time Dr. Moyer saw her. She had also visited his house on one occasion, and would have been at the meeting tonight if there had not been a sudden change in the weather. She has gained something like 20 pounds in weight; her pulse rate at present is about 111.

There is one thing very important in connection with this case, and that is Dr. Mix made a diagnosis of absolute, not relative, mitral insufficiency. Today he does not believe it was there. He believes it was entirely relative.

There is one other practical point in regard to the method of administration of the serum. He believes there is a neutralization point in these cases beyond the peradventure of doubt. He has proved that in this case. If he gave too large doses hypodermically, the woman would have marked symptoms of cardiac failure which resembled those of angina pectoris.

They were associated with pain in the arm. The danger of collapse was so great on one occasion that the author was telephoned for and certain stimulants were given at the time, and after the dose had been decreased the patient got along better. On the other hand, he thinks that one can give too little. In the other case he has referred to, the one with ascites, he tried to reduce the dose to ten grains a day. But this was too little, as the patient began to get worse again. She would take fifteen grains daily with-

out any particular difficulty, and he presumes that in the course of time it will be possible to reduce that still further.

In regard to the last point which he has in mind he did not wish to be understood as looking upon these cases as permanent cures. He thinks physicians will all reach precisely the same opinion in regard to serum-therapy in this disease as they have reached in cases of myxedema. According to Moebius, and to his limited observation in these cases, we have got to neutralize the condition; we have got to give enough serum to neutralize it, and as we go along we will have less and less neutralization to make, so that ultimately we will have less and less dosage to give, until finally it will be quite easy to run these patients on a very limited amount of serum—may be give it to them once or twice a week.

The possibilities of this method of treatment have been exploited in the foreign medical journals, and those who have read them must have noticed the favorable accounts concerning rodagen, with dried goats' milk, which has been used so favorably by so many investigators. Von Leyden, after some experience with this remedy, gives his unqualified endorsement of it.

It seems to the speaker, with these two cases, which were severe ones, with such remarkable restoration to health after the use of the serum, there can be no two sides to this question, that in a well-defined case of exophthalmic goitre, the serum treatment affords us very great possibilities.

Discussion.

Dr. Harold N. Moyer agreed with Dr. Mix that the two cases reported were extreme ones of exophthalmic goitre. He does not think he ever saw a more severe case; but he did not see either of them in the very worst stages, but at the time he looked upon them as cases with very little hopes of recovery. Of three cases of his own that were operated upon, all died.

As to the word cure, Dr. Mix expressed some doubt. The speaker did not think it was a good remark, as cases of exophthalmic goitre got well without any treatment. If they recover without treatment, they should recover from the use of serum some times. There is unquestionably a vicious circle in cases of exophthalmic goitre as in other affections, and if one can improve the physical condition of the patient, can control the symptoms, he gives the patient a chance to recover.

Dr. Julius Grinker said it was almost sacrilegious to break in upon a discussion dealing with such optimistic reports on the benefits or cures by a new serum treatment. However, he thinks it is necessary to sound a note of conservatism. There were pros and cons to this subject. Dr. Mix was very enthusiastic over two cases of Graves' disease, treated by the new method. Dr. Grinker has seen a case that was almost as bad as, if not worse than, the bad one cited by Dr. Mix, who got well in spite of treatment given by various physicians, and the patient consulted at least twenty. This patient is now practicing law. From having been reduced to a skeleton and ready for the grave, he had

gained in weight and strength so that now he was practically well. Dr. Grinker had seen a few other cases recover, after they had discarded all treatment.

He expected Dr. Kuh would have a series of parallel cases to report—so-called control experiments—in order to show the efficacy of the serum, and that those cases would be put upon rest—simple rest and the ordinary treatment, and then compared with those treated with the serum. However, this was not done. He believes the benefit derived from the serum treatment was due very largely to rest rather than to the serum.

As to the rapid changes in weight in cases of exophthalmic goitre, he would say that those who have observed cases have seen patients lose ten to fifteen pounds within a week, and then just as quickly recover them.

This ability to lose and gain weight rapidly is almost pathognomonic for this disease, so that a temporary gain in weight is no criterion of successful treatment.

Dr. Grinker quoted from a recent number of the *Deutsche Klinik*, which contains a review of Basedow's disease, its present status in theory and practice. The article was written by Eulenburg, who has practiced neurology for forty years, and has seen 600 cases of Graves' disease. He sees now about 30 or 40 cases of Basedow's disease annually, according to his own statement. In the last few years a number of preparations have been heralded broadcast with the greatest éclat, heavily advertised, and called by such names as antitoxin, antithyroidin, rodagen, Basedowin, etc. A little later thyroidectomized goats' milk had been used. Quite recently antithyroidin, upon the suggestion of Moebius, has been introduced, and Eulenburg describes what it is as follows: "It is simply blood serum taken from thyroidectomized goats about six weeks after the removal of the thyroid gland, and bottled up in 10 c. c. vials. Each flask is sold at the reasonable rate of six marks. As in the course of treatment $4\frac{1}{2}$ c. c. doses may be required, three times a day, the specific is rather expensive. . . . I have tried this remedy in a number of cases, some mild, and some rather severe, and have not gained the impression that it possesses specific effects, either curative or ameliorative. In three out of six cases I have noticed diminution in the size of the thyroid gland, in one where the thyroid was not very much enlarged, to begin with. But I have not noticed any change in the cardiac-vascular disturbances, and if there was any, it was only transient. In one case there was even an increase of the tachycardia, with irregularity of the heart's action, and a great amount of dyspnea. In the other cases every sign of improvement was lacking."

Dr. Grinker says that Eulenburg speaks very discouragingly of the operative treatment in this disease. He further wished to say that it is necessary for us to know that so far, even with the cases that have been reported tonight, we have had no convincing proofs of the efficacy of the new treatment; yet it is our duty to try it—try it as skeptics, and not as enthusiasts. In the cases that have been cited, the serum has not

done very much, perhaps nothing more than the old treatment by means of galvanizing the sympathetic, or the treatment of using anything and everything.

Dr. Moyer stated that he thinks the serum will be a diagnostic aid, and that whenever a patient does not improve on serum, the diagnosis of exophthalmic goitre was probably wrong, and after making that statement he says that some of his patients get well without any treatment. He supposes that every case of Graves' disease is benefitted by the serum treatment, but close scrutiny reveals only a pious wish.

He was glad to hear what Dr. Kuh had to say at the conclusion of his paper, that he hopes the serum may prove palliative. We all hope so.

He thinks that Dr. Mix is too enthusiastic, and to him he has already replied that he has seen as bad cases get well without treatment.

In connection with the discussion of the subject of exophthalmic goitre as a whole, the following may not be out of place: In 1900, Dr. R. Breuer, one of Nothnagel's assistants, reported ten cases of either thyroloidism or exophthalmic goitre produced by the administration of iodine. These patients had been taking iodine for a long time; they were elderly patients, somewhat broken down in health, and developed typical Basedow's disease. He shows that iodine given internally in the form of the iodides or applied externally may produce exophthalmic goitre which will persist long after the discontinuance of the drug. The practical point is, that when iodine is administered for a long period of time the physician should be very careful to examine for symptoms of so-called thyroloidism or Basedow's disease, which, of course, are not identical with the ordinary iodine intoxication, which is well known. It is claimed that in certain regions of Europe, where goitre or ordinary struma is prevalent, patients are more apt to develop Basedow's disease upon receiving iodine treatment. Dr. Grinker thinks it would be interesting to look for these cases and report them.

Dr. L. L. McArthur said he had learned through the industry of those who had taken part in the symposium that the source of the poison in cases of exophthalmic goitre is resident in a change in the thyroid gland. Whether this source be in a perverted secretion or a hypersecretion in not of great moment. It is believed that it is due to the presence in the blood of toxic products which produce the thyroid symptoms; and then the statement was made by one of the speakers that this poison cannot be extracted from the blood, but must be neutralized. He therefore wished to say that it can be prevented from getting into the blood by the removal of the greater part of the thyroid gland, as has been done and frequently demonstrated, and the number of cures is now sufficiently large to be encouraging, so that it would be a mistake to convey the impression that every case of thyroid enlargement, associated with peculiar nervous phenomena, is necessarily fatal if operated. He thinks Dr. Moyer has been extremely unfortunate in the experience he has had, namely, three deaths in three cases that were operated upon for well-

marked exophthalmic goitre. Dr. McArthur made a plea that cases of exophthalmic goitre be turned over to the surgeon before they are desperately ill or in the last stages of the disease. Turning these patients over to the surgeons when they are desperately ill from exophthalmic goitre was analogous to sending fourdroyant cases of appendicitis to the surgeon.

According to the most recent literature, Kocher, Mikulicz, and others have reported favorable results following operations in cases of exophthalmic goitre.

Dr. McArthur said while surgeons would hail with delight any prospect of improvement in these cases by the serum treatment or any treatment and would welcome it, particularly in the desperate cases on which surgeons would conclude to operate, he would still say that there was sufficient assurance of cure in the majority of cases, if taken early, from operations. At any rate, a still larger proportion of cures could be obtained from early operation than could be hoped for from a treatment which only aims at neutralizing the septic product of the disease.

Dr. C. C. O'Byrne concurred in the remarks of the last speaker. Sometimes there is a single nodule in the thyroid gland, very firm, and caused the symptoms of Graves' disease, perhaps as commonly or more so than a diffuse enlargement. He cited two such cases, one a medical student, who consulted him with reference to a small lump on the inside of the neck. The symptoms complained of were those of extreme nervousness, wakefulness, increase in the size of the gland, dyspnea on exertion, but no exophthalmos, no apparent struma, but at the time the speaker saw the patient he had a well-marked tremor, pulse 100, and easily excited. The single nodule was about the size of a walnut, situated in the lower part of the thyroid gland on the left side. This nodule was removed, and followed by relief of all symptoms.

The other patient, also a student, had a uniform enlargement of the thyroid gland, soft and pulsating; pulse exceeded 100. Patient was very nervous; had tremor of the hands and lips; exophthalmos; disturbance of vision. Patient was put on the serum treatment, but no improvement in symptoms was observed from its use. He operated, removed the nodule, which was followed by disappearance of the symptoms.

He has also operated on a case in which there was a diffuse enlargement of the gland, but the patient died on the second day following operation.

Dr. Moyer, in closing the discussion, said he did not wish to convey the impression that surgery was valueless in cases of exophthalmic goitre. He simply mentioned the fact that three of his operative cases died. These were desperate cases. Surgery is undoubtedly of value in suitable and selected cases.

CHICAGO NEUROLOGICAL SOCIETY.

A regular meeting was held Feb. 16, with the president, Dr. Harold N. Moyer, in the chair.

Dr. Geo. W. Hall presented a case of idiopathic muscular atrophy with bilateral ptosis and com-

plete ophthalmoplegia externa, stating that the case was a boy aged 11 years who according to the mother was perfectly healthy until age 4 years, when he had scarlet fever followed by gradual increasing difficulty in walking. The condition of the eyes had never been noticed by her. The family history was negative. The case approached the Landouzy-Dejerine type of the disease but the boy can close his eyes and mouth very well. The reaction of the eyes to light and accommodation was normal. There were no fibrillary twitchings, and the muscles responded to faradism. Patellar and radial reflexes were present but decreased. There was an absence of sensory and sphincter disturbances. Typical method of rising from the floor was demonstrated. The chief point of interest in the case was the presence of the bilateral ophthalmoplegia externa, which was probably congenital due to nuclear involvement.

Dr. L. F. Barker said the case was interesting to him as to the exact relation of the ophthalmoplegia to the muscular atrophy. If it is primary in the eye muscles it is the only case on record. The ophthalmoplegia is not a part of the general myopathy. The fact that it is so complete seems to make it very probable that it is binuclear. One or two cases of myopia have been examined by taking out a bit of the muscle and are said to have shown a typical change, though but one muscle was paralyzed. Here we have complete bilateral. It would hardly be supposed that some of the face muscles would not be involved, so I lean to the view expressed that this is a combination of the nuclear disease with the myopia. It may be congenital, or it may have followed the scarlet fever. I do not think this could possibly be anterior horn disease, from the general distribution of the atrophy.

Dr. Harold N. Moyer said it seemed to him the distinctions made in these clinical types were somewhat involved. In some of these cases some muscles will show hypertrophy while others show the opposite, and it never had seemed to him a well founded distinction. In this case, as in most others, can be seen two types mixed.

Dr. Hall added that the boy had had a pneumonia unresolved for some time, and there was still evidence of the old inflammation on the right side. In these cases it is not uncommon to find chest inflammation, owing to the poor muscular action.

A case of intermittent claudication was presented by Dr. James B. Herrick. The patient had first been seen by Dr. Jacques, to whom credit should be given for the diagnosis. The patient is a Hebrew, 38 years old, a peddler, with no history of excessive alcoholism, no history of syphilis or over-indulgence in tobacco. He first noticed something wrong with the foot about one year ago, when he had some pain in the sole of the foot and noticed that on walking he would have some pain in the foot and the calf of the leg would pain and become stiff and cramped, and on walking the right foot would become almost as though dead, and white. Four months later a somewhat similar feeling was experienced in the left foot. There was the same painful sensation on elevating the foot and the same loss

of color. If he allows the foot to hang down it becomes more or less red, much as in erythromelalgia. Some time ago what he took to be little abrasions appeared on the outer and inner surface of the right foot. These increased in size and there was more or less burning in or around these ulcers. Later the nail of the little toe became affected and loose and a small ulcer appeared on the inner aspect of the little toe. A few weeks ago in the night he was taken with a good sharp pain in the pericardiac region, running out into the arm, and resembled in some respects angina pectoris.

The physical examination, with the exception of the feet, is practically negative, but the radial pulse is small and of low tension. The registration is in the right pulse 120 m.m. of mercury, and in the left 90, instead of the average of 140. No arteries can be felt in the foot. The dorsal and posterior tibial arteries cannot be palpated, and nothing approaching sclerosis can be made out in the radials. Even in bed and quiet, he has more or less pain in the foot. The same phenomena of paleness and pain in the foot can be produced by pressure on the femoral as he lies in bed. In walking one of the chief complaints is the pain in the calf of the leg. The case seems to be one of intermittent claudication. These cases that have been described have most of them shown arteriosclerosis, both in amputated limbs and in autopsy. In this case we make out no arteriosclerosis, but in some of the cases of Charcot and Erb there was complete absence of pulse in the foot, and this patient shows, as do many of their cases, either gangrene of the toe or some trophic disturbance. The relation between this and erythromelalgia would seem to be close. Erb in the conclusion of his longest article, about five or six years ago, called attention to the fact that intermittent claudication he would regard as angio-sclerosis, that Reynaud thinks it angio-sclerosis, that erythromelalgia was a neurosis and that instead of a spastic condition there was rather the opposite, so that when the foot was down the dilators of the vessels, or the constrictors were paralyzed so that increase in color and even in temperature of the parts could be made out. Oppenheim, it was believed by the essayist, called attention to the fact that there was probably a marked spastic condition in these cases, and even Erb, who is inclined to call the disease a dysbasia angio-sclerotic, thought the same. One must assume a spastic condition to account for the bloodless condition and for the pain and gangrene sometimes met. An X-ray was taken of this foot, thinking to discover some sclerotic condition of the vessels, but it was entirely negative.

Asked by Dr. Billings as to the effect of the dilators, Dr. Herrick said that nitro-glycerine gave him relief from the pain. Perhaps he had not been justified in not having given strophanthin, as he had wished the case to be seen as it was. Digitalis would be indicated, but it has a tendency to contract the vessels. If the heart beat could be materially strengthened, it would seem that some material good might be derived. Erb, in his case, had a great deal of good from

strophanthin as well as the use of warm foot baths, electricity and iodines.

Dr. Mettler asked as to the effect of extreme cold and heat. The patient said he was worse in cold weather. Dr. Mettler said he had seen the statement some place that the difference in one of the symptoms in arthro. and Reynaud's disease was the difference in the sensations produced by extreme cold and heat. In the former cold gave the relief, while the reverse was the fact in Reynaud's.

Dr. Herrick said he mentioned the race because Oppenheim is inclined to think the neurotic element plays quite a part, and he says the Hebrew race is notoriously neurotic, and he thinks that is why such a large per cent of those who have this disease are Hebrews. Erb lays great stress on tobacco. Another point, this man has a right inguinal hernia, and in one case the wearing of a truss was regarded as having something to do with the obstruction of circulation. The rectum is entirely negative, which ought not to be overlooked, as there might be pelvic conditions causing obstruction to the vessels.

Dr. Chas. L. Mix said it reminded him of a case of his own, a man 72 years of age, who had chronic interstitial neuritis and a certain amount of arterio-sclerosis. It began as this, with pain in the great toe, followed by whiteness of the toe and ulcers at the inside of the nail. He did not lose the nail, but came about as near as this patient. In his case the foot was better when elevated. The pain was worse at night than in the daytime. He liked warmth, and the room was kept hot and clothes heated on an oil stove and put on constantly to give relief. The pain was intense. At one time the necessity of amputation of possibly the whole leg on account of the gangrene which seemed to be approaching was considered. He was given nitro-glycerine, spartein and antropin. He was on iodide of soda also continuously, and in the course of five months made a recovery. He had remained well and had no return of his intermittent claudication.

Dr. Williams asked if there was indication as to whether the etiology of the dilatation of the heart was myasthenic. The attack of pain which was suggested as having been angina might have been due to either factor, and the feebleness of the pulse everywhere is not like the condition met in cardiac myasthenia, and yet there is no condition in the vessels, as far as can be seen, to make one think of cardiac degenerations. The pathology in this puzzling case may be elucidated to a slight degree by the treatment. Attention was called to a paper by Thompson of New York on the effect of different drugs on relaxation of arteries, in which most remarkable results were secured by small doses of aconite, where the nitrates failed.

Dr. Herrick said his plan was to give strophanthin to improve the cardiac tone. Erb calls attention to the local trauma occasionally present in these cases. One was the case of a well-to-do man who about 60 days in the year went fishing in the mountains and waded for hours through the cold mountain streams fishing for trout. He thought that determined the excess-

ive degree of sclerosis in the foot. Dr. Bevan had called the essayist's attention to the fact that Dr. Gunn in his lectures, when he would meet with a case of Pott's toe, would refer to the fact that "this man complains of the tire in his legs, which is the tire of approaching gangrene."

Dr. Mix thought the fact that the pain is worse at night had some bearing on the etiology, as pointing to an increase in pain at the time of a decrease in the amount of arterial pressure, and the same had occurred in his case, i. e., the maximum of pain at the minimum arterial pressure.

A case of Ophthalmoplegia with implication of the motor branch of the fifth nerve was also shown by Dr. Herrick. The patient, 32 years old, came to Presbyterian Hospital three weeks ago. There is a negative family history, and her personal history rather uneventful with the exception of a removal of a mass of supposed tubercular glands from the left side of the neck ten years ago. She also has had several attacks of tonsillitis. The 10th of November of last year she worked in a cold room, bending over packing a trunk, and took cold. She felt well on retiring, but on awakening noticed that she could not open the left eye, had quite a severe pain in the left side of the face, the jaws were stiff and she could hardly open the mouth. The severe pain in the left side of the face lasted some time, as did the stiffness of the jaws, but with a relaxation of the jaws the pain disappeared but she did not again regain the ability to open the eye. She has had no difficulty in swallowing, in talking, no trouble in seeing out of the right eye; taste, so far as she could tell, was perfectly normal. It is to be seen she has a marked ptosis on the left side. She can wrinkle the forehead and the movement of the facial muscles is perfect. The left eye is in a completely immobilized position, with the slight exception that when asked to look down there seems to be the least bit of a motion with a slight rotation—a tiny motion of the superior oblique; this has occurred since her stay in the hospital. On the first examination there seemed to be absolute loss of all motion in all the eye muscles. There is complete absence of the reflex or contraction of the iris for distance and for light. There seems to be a very slight consensual reflex. The ciliary accommodation is entirely gone. With the right eye she can read fairly well, sees at a distance, but as things come nearer they appear less distinct. Examination of the retina shows slight pallor of the right disc and more marked pallor of the left, and Drs. Hotz, Brown-Pusey and E. V. L. Brown agree there is some pallor of the disc. It was also found the color field was narrow for green. The paralysis of the third, fourth and sixth seems to be complete, with the exception of a slight power of control over the superior oblique. It will be remembered that at the beginning of the attack there was quite severe pain in the left side of her face, seeming to be some irritation of the sensory fifth; also difficulty in opening the jaw, irritation of the motor fifth. Now there is loss of power of the motor fifth. Sense is perfect. When asked to close the jaw the masseter on the right side bellies up

fully, but not on the left side. The same is true of the temporals. On opening the mouth wide there is a little deviation to the left, the whole jaw being drawn a little more to that side. There is a little sagging of the floor of the mouth. There is a trace of albumen in the urine. Since the onset of this trouble she has had one or two attacks of tonsillitis, but none preceding this attack. There was no fever at the time of her taking the cold. However, the next day after the onset she vomited, and some for a couple of days thereafter.

The lesion would appear to be in the lower neuron, either as a multiple neuritis or some pressure at the base of the brain as from the pons or a nuclear disease—the latter being most probable. If it is agreed that she has optic atrophy, the question can properly arise as to whether she has the beginning of some disease like multiple sclerosis and that this is but an incident of multiple sclerosis. The knee jerks are present and her station is good.

In discussion of this case, **Dr. L. F. Barker** said that while interested in the case which he had been permitted to examine, he was not ready to make a full and positive diagnosis, but he had ideas which he was willing to express merely tentatively. Five or six possibilities may be thought of. First, some infection or intoxication may have caused a nuclear disease or a neuritis; the acute onset, the albuminuria, the recurring tonsillitis and the fact that she has a little fever every day, though the temperature has never been higher than 99.8, suggest this. The leucocytosis amounted to only 11,000. Cases of ptosis and ophthalmoplegia something like this have occurred after common colds, rheumatism, influenza, diphtheria, and tubercular meningitis. As the essayist has said, multiple sclerosis has also to be thought of, but another thing which should be borne in mind is the possibility of beginning brain tumor. In connection with the possibility of cold and rheumatism, there is a case reported by Raymond (1890) of a woman, aged 25, who caught cold and had paralysis of the left lower facial, then of the twelfth, of the motor fifth and sixth, and of two branches of the third nerve. Discs normal. Recovery in three months.

Another case is that of Michel (1872), a soldier 23 years old, who was attacked with pain in temples and dizziness; temperature 39.5. On the fourth day complete right oculomotor paralysis and hyperemia of the right disc; on the seventh day, pain in knee. The eye paralysis disappeared in eleven days, the rheumatism went on five weeks; the patient ultimately got quite well.

Of the cases of diphtheritic paralysis, one is reported by Futterer in 1896, not dissimilar in symptoms to the one before us; there was complete oculomotor paralysis, followed by complete recovery. There is no evidence that the patient Dr. Herrick shows has recently had diphtheria. And moreover it is very unusual to have in diphtheritic paralysis any involvement of the sphincter of the iris. Besides there has been no palatal paralysis in this case.

Of the influenza cases accompanied by ophthalmoplegias, one case is reported by Gutman (1890) with right ptosis and right internal and

external ophthalmoplegia and aortic insufficiency; and one still more like the case before us by Schirmer (1890) in which there was right ptosis, prominent eyeball, total right-sided ophthalmoplegia, right pupil rigid to light and accommodation, the eye-ground normal; vomiting, headache and diminished sensibility in right half of face were other symptoms; the tongue deviated to the right, as in this case, and the masticatory muscles were weak on the right side. This case of Schirmer's is almost identical in symptomatology with the case Dr. Herrick has just presented except that in the present case the optic discs are pale.

Of the cases of tubercular meningitis which have presented similar symptoms, Seitz (1874) had complete right oculomotor paralysis coming on suddenly, as the first sign of the disease. The autopsy eight days later showed the right pedunculus cerebri to be red externally and softened, and the right oculomotor nerve friable. Kahler (1887) had a case of complete oculomotor paralysis in a woman of 36; eye grounds normal; temperature 38 degrees; slight stiff neck; later paralysis of the left seventh nerve. Tubercular meningitis found at autopsy.

Among the recorded cases of multiple sclerosis I cannot find a case like this. There are cases of eye muscle paralysis reported, it is true, but no one at all similar to this symptom-complex which Dr. Herrick's patient presents.

Certain cases of tumor cerebri in the literature resemble closely in symptomatology this case. For instance, Sir Charles Bell had a patient with left ptosis, rigid bulb, dilated, rigid pupil, anaesthesia and neuralgia of the left side of the face, neuroparalytic keratitis, paralysis of the masticatory muscles on the left side, left eyesight poor, and temporary paralysis of the seventh nerve. The autopsy revealed a tumor in the cavernous sinus lateral to the foramen for the meningeal extending forward as far as the superior orbital fissure artery. In this case the 3d, 4th, 5th and 6th nerves were included in the tumor and were atrophic. The 2d nerve went over the tumor and was gray. It would be easy for the chiasm to be affected there. A lesion in the same situation could account for the symptoms in the Herrick's case very well.

Turck (1855) had a patient, 34 years of age, who 4 months before death suffered from violent pain in right supra-orbital region which was followed the next day by right ptosis and almost complete paralysis of the right oculomotor nerve. The autopsy showed a tuberculous dura compressing the ophthalmic nerve and the right half of the chiasm, and there was infiltration of the right oculomotor.

Rosenthal (1886) had a case of left ptosis, double choked disc, partial left ophthalmoplegia, anaesthesia of the trigeminus, due to a tumor, the size of a bean, involving the left gasserian ganglion, oculomotor nerve and cavernous sinus.

Mingazzini reports a case in a man of 30; left nosebleed; left tinnitus; left headache; left ptosis; and later complete left internal and external ophthalmoplegia; left pupil wider; vision of left eye impaired; paresis of the muscles

of mastication on the left side of the face, with hyperaesthesia of the left side of the face and pallor of the left optic disc. Sarcoma from the antrum of Highmore, including the turbinates and the left sphenoid bone, infiltrating the sella turcica, and extending toward the clivus.

The evidence from the literature then is in favor of a lesion in this case of Dr. Herrick's in the region of the cavernous sinus, probably under the optic nerve involving the motor part of the 5th, the 3d, 4th and 6th nerves there. Whether a localized meningitis (tubercular or other) or a neoplasm I will not attempt to say, but I think it most likely one of these two.

In reply to a question from Dr. Williams as to whether in any of these cases there was such an acute onset, Dr. Barker said that in one the paralysis was sudden and complete at the beginning. In some of these cases the tumor developed for sometime before any of the acute symptoms particularly referable to the nerves appeared, and then the nerve symptoms came suddenly. Tubercular disease is likely to produce a sudden change from the fact that it causes thrombosis of the small veins which will often result in a hemorrhage, which causes the actual paralysis.

Dr. Herrick called attention to the connection of the removal of glands from neck in this case, which he had tried to reconcile with the acute onset and the utter absence of symptoms preceding it. There was no history of lues.

Dr. Mix asked if there would not necessarily be signs of involvement of the ophthalmic division of the superior maxillary division of the fifth if the lesion were where Dr. Barker thinks it is. They lie in the cavernous sinus and tumor at that point would involve the 6th nerve, the 3d and 4th and the two upper divisions of the fifth as well as the inferior maxillary as it goes through the foramen ovale.

Dr. Barker said that the cases in the literature showed that these could escape.

Dr. Herrick said she was on antispecific treatment now, and the patient said the medicine was the same as some she had taken before.

Dr. Billings said he had a case like this in the hospital, in which there was a left ptosis with ophthalmoplegia, and fixation of the iris; the ciliary muscles seemed to be normal. She had a marked superior orbital neuralgia and great tenderness over the left temporal region but no other involvement of the 5th. The symptoms entirely cleared up under iodides.

Dr. Moyer had seen a case almost identical with this at Bellevue, which was found to be osteo-sarcoma. The probabilities, he thought were that this case was the same, because if due to specific infection it would present other features by this time. It was either tubercular or a new growth.

A cured case of myasthenia gravis was presented by Dr. Harold N. Moyer. The case had been shown to the society in October of 1902, when all had agreed that it was a true case of myasthenia gravis. Dr. Moyer had first seen the case in August of that year, when he had been sent to him by Dr. Pusey, whom the patient had consulted on account of trouble with his

eyes. He could not focus the two eyes and had drooping lids. Subsequently his weakness extended to his arms and to his legs, so that he was shortly spastic all over. He was worst from about the 15th of December 1902 until the 10th of February, 1903. He could not completely dress himself during that time and was almost helpless. He could not eat solid food, which he could neither masticate nor swallow. He could walk about the room but could not get on his feet without assistance. His improvement when it began was slow, but steady. He seems now as well as ever, but has slight weakness in fingers in the way of grasp, the dynamometre showing 15 with one hand and 30 with the other. The legs are all right and the vision is all right. The eyes did not move from the middle of August 1902 until the middle of February 1903. The amelioration of his symptoms began 2 years ago and he has considered himself well for a year and a half. He walks from a mile to three miles every day, and could easily do five miles a day. He can now use the typewriter, which he had been obliged to give up. He has no sensory symptoms. When the patient was presented he had the general symptoms of coated tongue, and general failure of elimination, but never any rise of temperature. He had every symptom of typhoid fever without the fever. These have all passed away. At one time during his illness he had trouble with breathing which he attributed to some treatment he was using. He could not get out of his chair, and had to call for help. Dr. Moyer had made a diagnosis of myasthenia gravis from the symptoms when sent to him by Dr. Pusey. He had shown patellar reflexes, but these would soon exhaust, one or two strokes being all that could be elicited. He first noticed improvement in February, exercised about the house until April, when with the assistance of a friend he tried to get a few blocks to the barber shop, but had to stop and lean on the fence for support after going a short distance. In July he had gotten so he could go around without assistance. The treatment given by Dr. Moyer had been nitrate of strychnine.

Dr. Billings asked if it were surely myasthenia gravis, and if there were records of cases cured in so short a time.

Dr. Moyer replied that no one who had seen the case had a doubt of the diagnosis. While cases had been reported cured, none had been reported cured for so long a time. He was so bad during the winter that it was not expected he would live through the summer. A pretty fair reaction could be elicited for one or may be two jerks, and then would go right out. Asked as to the nasal smile, it was said this did not exist, but the features were mask-like, a fixed, expressionless look, and the eyes did not turn. He would look about by moving his head.

Dr. Julius Grinker presents a case of *pachymeningitis cervicalis hypertrophica*, simulating syringomelia.

Case.—J. W. B., aged twenty-six, male, colored, single, electrician, came under my observation Jan. 28, 1905. His father died by accident at the age of forty-seven; his mother died of an unknown cause at the age of twenty-two. He was

the only child. The grandparents reached old age. No tuberculosis, carcinoma or nervous disease are found in his family record. His habits were always good. He never drank, nor smoked to excess. Of venereal diseases he had a mild case of gonorrhoea, but never syphilis.

The patient was well up to the age of twenty-one, at which time he developed dysentery while serving as a volunteer in the Spanish-American war. One year later he was sick with typhoid fever and cerebro-spinal meningitis. He states that during the acute stage of his illness he suffered from fever and stiffness of the neck muscles. For a period of thirty days he had pains in his back, left leg and left arm. The pains were sharp and shooting, like neuralgia. When, at the end of the month, they had entirely disappeared, he entered a period of ill health which lasted about three months. During this time he was weak and unable to work. Within four months after the beginning of the disease he could resume his usual occupation, and boasts of having been able to carry a sewing machine up a flight of stairs. Even at this time he complained of one symptom that annoyed him since the termination of the acute stage of the disease, namely; that the sudden turning of the head would regularly cause him to become dizzy. This symptom lasted until two years ago.

About four-and-a-half years ago, that is, about one year after this attack of typhoid fever and meningitis, he experienced a peculiar feeling in his left hand and left leg which he described as a "tight, sleepy feeling," which was accompanied by muscular weakness which gradually grew worse. On the left lower extremity this paresthesia involved the foot and the leg to halfway between the ankle and knee. Five months later the right hand became similarly affected. He never experienced any abnormal sensations in the right lower extremity. One year after the onset of the paresthesia the right hand improved, but the left-sided numbness continued. There was in addition a dragging sensation and weakness of the back and left leg, which was always worse when the patient walked up a flight of stairs. In September, 1901, while the patient was marching with his regiment, he was unable to obey his officer's command for "quick-step," his feet seemed to stick to the ground.

In 1902 the muscular weakness in both hands became more pronounced. For the past two years he has been unable to raise his hands over his head, and he noticed that his shoulder girdle had become very weak.

Two years ago the patient scalded his left hand with hot water, which he did not feel but which blistered his skin considerably. The vesicles disappeared after a time, but new crops of vesicular eruptions continued to come, which were rather slow in healing.

Bladder disturbances began very early in the disease and have continued ever since. He cannot hold his urine very well; if he fails to empty his bladder frequently, there is an overflow of its contents. Constipation and sexual indifference amounting to impotence began at the same time, although up to one-and-a-half years ago

he still had desire but no power. Now even his sexual libido is in abeyance.

The weakness in his hands and his left leg and foot, which has been diagnosed by various physicians as hemiplegia, lead paralysis, multiple neuritis and hysteria, has of late entirely disabled him from following his occupation. Of his sensory disorder he is entirely ignorant and it is chiefly on account of his trophic disturbance that he seeks our advice.

Status Praesens. The patient is a well-nourished boy, of about five feet six inches in height, and about 145 pounds in weight. His gait is somewhat spastic, but his left side is worse, resembling very much hemiplegia. The left hand is the seat of trophic disturbances. Upon the dorsum are seen two large blebs and a generalized puffiness with oedema. The third and the little fingers present deep ulcerations on their dorsal surfaces, which are fully two inches long. Evidence of former vesicular or pustular eruptions are seen over various portions of the body. The face is symmetrical, the palpebral fissures are of equal size; the pupils are equal and react well to light and accommodation. There is no abnormality of the eye muscles, no nystagmus, no optic atrophy, nor optic neuritis. The tongue does not deviate. The right hand shows a considerable flattening of the palm and some wasting of the extensors on the dorsum. Flexion and extension, adduction and abduction of the fingers are still possible, but below normal; in the wrist flexion and extension are very weak. The left hand is almost parietic, and atrophies cannot be seen on account of its puffy condition. Flexion, and particularly extension of the wrist, are greatly impaired. In the left foot dorsal flexion is almost impossible; the muscles are atrophic. Although the patient considers his right foot perfectly normal, a similar weakness and atrophy of muscles is observed, which is less marked than on the left side. The lower extremities appear spastic upon passive motion.

The left thenar and hypothenar eminences are rather soft and flabby, the lumbrical and interossei muscles are extremely weak. The left triceps has almost entirely disappeared. The right triceps is present, but weak. In the right hand pronation and supination is possible but below normal. Supination is impossible in the left hand. Wrist extension on the right side is slightly reduced; on the left side, impossible. The pectoral muscles appear atrophied in their upper portions; adduction of the extended arms can be easily prevented. The deltoids, anterior and middle portions, are well developed, but the posterior portion is defective bilaterally. The upper portion of the trapezius muscles is bilaterally well-developed; part of the middle and the entire lower portions are defective. The serratus magnus has completely disappeared on both sides. The paralysis becomes very marked upon an attempt to abduct the arms, or to raise the arms above the horizontal position, which later is entirely impossible. When the patient attempts to extend the arms forward the scapulae project wing-like from the thorax, so that the observer can place his hands between the scapula and thorax. When the arms are extended

outwards, the inner borders of the scapula touch.

An electrical examination of the weak muscles yields response to both currents, but the quantity of current required for some of the muscles is enormous. Besides the quantitative changes I have been unable to detect either the partial or complete reaction of degeneration in any of the muscles, and it goes without saying that there is no response over muscles that have entirely disappeared. The palpable nerves are not enlarged.

Reflexes. The superficial reflexes are present and of normal intensity, with the exception of the scapulo-humeral bilaterally and the left plantar reflex, which cannot be elicited. Of the deep reflexes, those for the upper extremities are abolished, the knee-jerks and Achilles jerks are equally exaggerated. Babinski and Oppenheim signs are absent. There is no tremor but a flickering in the affected muscles can be plainly seen. There is no ataxia of station nor of gait.

Sensation. The tactile sense is involved in certain areas. The dorsum of the left hand is entirely anesthetic, other areas are hyperesthetic; that is, the lightest touch with a wisp of cotton cannot be felt, but a touch with a coarse object, such as the finger or test-tube, will be perceived. The sense of position is approximately normal. The pain sense is disturbed. The temperature sense was tested by means of test-tubes filled with hot and cold water.

In a general way the disturbances of the temperature sense, both for heat and cold, are found in the same areas, although there is greater disturbance for heat than for cold.

Vasomotor disturbances are not apparent; perhaps because the patient is colored.

This corresponds in many phases with syringomyelia. The tactile sense is slightly involved, or not at all. Some will no doubt still claim this is syringomyelia. That has the trophic disturbance, the motor disturbance, but we know since Charcot described his disease that we can get the picture from compression. That is what is now called meningomyelitis. In pachymeningitis cervicalis hypertrophica it is usually stated that there is spasticity of the lower extremities, bladder involvement, rectal disturbance and sexual disturbance, but no atrophy, showing that some portion of the cord lower down must have been involved. I believe that we have to deal with meningomyelitis which began in 1900, went through three typical stages, a painful stage, a stage of ill health and the last stage of ascending and descending degeneration. His reflexes are all gone in the upper extremities. He has a great deal of spasticity and a degree of ankle-clonus, but not well marked. The Achilles jerk is very proscribed. His sphincter reflexes are present below but not above. No Babinski and no plantar reflex. The Gordon reflex is obtained, but the essayist is not sure of its reliability. He has the peculiar sensory disturbance, the trophic disturbance, pain, and no history of syphilis, no tuberculosis in family, slow onset, three periods, bladder disturbance, sphincter disturbance. I think it is pachymeningitis cervi-

calis hypertrophica simulating syringomyelia or a case of chronic meningomyelitis. Strobe takes a decided stand against the former. Says it is not always confined to the cervical region, there is not always a hypertrophy. The author thinks many of the cases reported as syringomyelia will, on close examination, be found pachymeningitis cervicalis hypertrophica. The eye seems perfectly normal. The sensation of the bladder is fullness, and he knows he has to pass water, consequently there cannot be anaesthesia there, but there is incontinence. He never passes water if he can help it. The sphincter symptoms in connection with the other are explained by the compression of the cord below the cervical area. It is known that the fibres come from above. There is secondary degeneration of everything below, therefore we get a spasticity, exaggerated reflex because the pyramidal tract has been involved in a myelitis and one beyond the cervical region. In Charcot's disease there is a period of irritation, and after that a period of degeneration, followed by anaesthesia.

Dr. Barker asked as to the patient having been in the tropics. Dr. Grinker said he had been in Cuba. In leprosy the anaesthesia appears in patches and never in glove shape as in this case. In leprosy there is no exaggerated reflex. There is not a symptom of anaesthetic leprosy. He has no sign of it, and then the face is always involved.

Dr. Moyer said he saw nothing in the case inconsistent with anaesthetic leprosy as he understood it. The root symptoms, the meningitis, he had.

Dr. Grinker said this argument was sound, but that most of the books say that in that case the anaesthesia occurs in patches.

Dr. Barker asked how the glove patches were reconciled with root lesions or cord lesions. That has been given as belonging to the segmental, and that we cannot answer.

Dr. Grinker said that in the meaning of the German word, this could not be reconciled, but in the meaning of the French word, "Segmentaire" it was.

Myo-Clonus Multiplied.

This case was presented by Dr. O. M. Steffen-son, who stated that the patient was a male; aged 26; married; born in United States. The family history was completely negative. Patient had suffered from measles at six years of age, and had made good recovery. He had been engaged in prize fighting from his 17th to 21st year of age. Five years ago he fell on his back from a scaffold 15 feet high, but apparently sustained no severe injuries, going back to work within a few days. Ten days after the accident he noticed tremors in the arms, legs, eyelids and various skeletal muscles. These tremors or clonic contractions were bi-lateral, varying in amplitude and frequency, averaging about 90 per minute and appearing intermittently. They may come spontaneously, but usually from some voluntary act, such as mastication, yawning, etc. This condition was more pronounced on the left side; the sensation was perfectly normal, the reflexes somewhat increased, especially on the left side. There was no weakness of any muscles in-

involved, neither were there fibrillary tremors or changed electrical reactions. The movements have sometimes thrown patient from his seat. They were not present during sleep. The patient appeared mentally depressed.

CHICAGO SURGICAL SOCIETY.

A regular meeting was held March 6, 1905, with the President, Dr. L. L. McArthur, in the chair.

Dermoid Cyst of Lung.

Dr. Nicholas Senn reported a case of dermoid cyst of the lung, saying that thus far there are only sixteen cases on record. This is an unusual and very rare surgical affection. The patient, C. R., a male, aged 23, American, unmarried, a railroad man by occupation, entered the out-patient department of the University Hospital, Michigan, July 19, 1904. The case was very carefully studied there, and a history of it very accurately reported by the attendants at the clinic, and particularly by Dr. Roger S. Morris, to whom Dr. Senn was indebted for a complete history of the case. When the patient entered the Presbyterian Hospital, Chicago, the speaker had no idea that the case had been so thoroughly studied. The history of the case as related by Dr. Morris is as follows:

The patient entered the University Hospital, July 19, 1904, when I first saw him with Dr. Ellis. From certain points in the history, which will appear presently, together with the result of the physical examination, I diagnosed the condition as probable dermoid cyst of the thorax, though unaware at the time of similar cases. The patient, a resident of a neighboring town, was unable to remain at this time, but was advised to return. This he did. On July 27, 1904, he was admitted to the medical ward, and the following history was obtained:

On admission the patient complained of cough, expectoration of large quantities of foul-smelling sputum, and hemorrhages from the lungs.

Family History. Father is living and well. Mother has had "stomach trouble" nearly all her life, but is in good health at present. The patient has two brothers and three sisters who are alive and well. An aunt on the father's side died of "hemorrhage of the lungs and dropsy;" nothing more definite is known of her case. Otherwise the family history is negative.

Personal History. As a child, the patient was very well. He had measles, chickenpox, and a mild attack of diphtheria or tonsillitis. In all instances recovery was uneventful. At the age of 12 the patient had a diarrhea which persisted for about a year. Since then the patient has enjoyed good health until the onset of the present trouble.

History of the Present Disease. About nine years ago (eight years, according to out-patient history), that is, about the time of puberty, the patient had a severe attack of pneumonia on the left side, followed by a feeling of tightness across the chest and pain on breathing. The latter was localized to an area about the size of a hand in the precordial region. Prior to the attack of pneumonia the patient says

he was struck over the heart by a drunken man, and ascribes the pneumonia which soon followed to the blow which he received. Between the time when he was struck and the development of the pneumonia, he had severe neuralgic pains in the region of the heart and in the left shoulder. A year later the patient had another attack of pneumonia, which lasted about eight weeks. During a coughing fit, a large quantity of "pus" was coughed up at one time ("over one quart.") The "abscess" or "empyema" discharged three times in the next three or four days. The patient describes the so-called pus as a "yellow, semi-fluid material." After raising this material, the patient became much better, but has coughed and expectorated a good deal ever since. Four years ago the patient had a very severe hemorrhage from the lungs, and since then he has had one about every six months. The last one occurred just before the patient returned to the hospital. At times the hemorrhages amount to about one pint. During the last three years the patient has noticed a "rotten" odor to the sputum. In March, 1904 he went to Colorado for his health. He was examined by a physician, and told that he had empyema. Operation was advised. This the patient did not submit to. No tubercle bacilli were found in his sputum at this time. For some time the patient has coughed up hairs in his sputum; these are from one to six inches long. Since last March there has been some soreness over the right side of the chest. Expectoration is much more profuse when the patient is lying down. He has not lost weight.

Status Praesens, July 29, 1904. Temperature has been normal since admission, respirations 20, pulse 72, regular, of fair size and tension. No palpable thickening of the arteries. Patient looks very well nourished. Active dorsal position. Mind clear. Build rather short and stocky; strong frame; panniculus fair. Muscles well developed and rather soft. The skin is of good color, smooth, dry, and elastic. No edema of ankles. There are no stiff joints. Lymph glands about left clavicle and behind left sterno-cleido-mastoid are slightly enlarged; otherwise negative.

Expression is negative. Pupils are equal, react well; sclerotics are clear, slightly bluish. Conjunctivae and lips are of good color. Teeth are in fairly good repair. The tongue is large, clean and moist. Examination of neck negative. Thorax is well formed, rather large. The left side seems slightly fuller than the right. The epigastric angle is about a right angle. Expansion is rather small, slightly less on the left side, especially on deep breathing. The difference is more noticeable in the lower part of the thorax. The clavicles are equally prominent. On percussion the apices are of equal height, about one and one-eighth inch above the clavicles. Above the second rib the percussion note is the same on the two sides. Below this level the note is somewhat hyperresonant on the right, with relative dullness throughout the left front, the upper border of the relatively dull area sloping downwards and backwards into the left axilla. Traube's space is clear. There is no absolute liver dullness. The lung liver

border is on the sixth rib in the right nipple line; it extends straight around. The lung descends to the seventh rib on deep inspiration. Auscultation above the right clavicle gives rather harsh vesicular breathing, with fairly high-pitched sybilant rales on inspiration; below the clavicle throughout the right side there is moderately strong vesicular with no adventitious sounds. Above the left clavicle the breath sounds are obscured by sonorous bronchi which are heard both on inspiration and on expiration. Below the left clavicle there is harsh vesicular accompanied by dry rales of medium pitch, the vibrations of which can be felt on palpation. Below a line drawn from the anterior axillary fold to the left nipple the vesicular is very weak, and toward the end of inspiration a few crepitant rales are heard. The ausculted spoken voice is slightly weakened between the second and fourth ribs on the left; vocal fremitus unaltered here. Posteriorly, the apices are of equal height on percussion. Below the level of the spine of the eighth dorsal vertebra there is relative dullness on the left side; this is continuous with that previously described in the axilla. In other respects percussion of the back is negative. The upper border of relative dullness does not move with change in position of the patient. Auscultation reveals fair vesicular throughout the right back and on the left back down to the dull area, where the vesicular is weak and distant. Pectoral fremitus is slightly weaker on the left side over the same area. Auscultation of the spoken voice is negative behind. The apex of the heart is best felt in the fourth intercostal space in the nipple line. At the beginning of the examination a pulsation was seen in the second and third interspaces, which was forcible enough to be palpated. Absolute heart dullness begins on the fourth rib and extends outward to the apex; on the right it extends to the left sternal line. The relative heart dullness cannot be separated from that obtained over the left lung. The heart sounds are moderately strong and clear. The second pulmonic is reduplicated and accentuated. Abdomen is on a level with the ribs. It looks natural. The walls are quite resistant, making palpation difficult. Spleen and liver are not felt. Percussion is negative. Leucocyte count, 9,256 on July 27, 1904. Urine examination was negative. Sputum was examined July 31, 1904. The color was whitish-gray. Sputum had a foul odor, like that of "bad" eggs. It separated into three layers. No tubercle bacilli were found; no elastic tissue. Later a hair was found in the sputum. Fluoroscopic examination shows a slight shadow throughout the left side above. Below the level of the eighth dorsal spine and extending to about the level of the eleventh dorsal there is a diffuse dark shadow, as dark as that from the liver. The entire right side is clear. A skiagraph was taken; unfortunately the negative was poor."

Dr. Senn stated that this clinical history was very full and accurate, and corresponded exactly with what he had found on careful examination of the patient repeatedly after his entrance to the Presbyterian hospital. The patient coughed up during his residence in the

hospital for a number of weeks six or eight hairs. These hairs were very thin, lighter in color than the hair of the scalp, and varied in length from one to six inches. Sometimes, when patient expectorated these hairs, he felt a certain sensation which he referred to the base of the heart. Expectoration, at times, had been very copious and fetid. The patient's general condition was excellent. There was no wasting, no cachexia, hence any suspicion of tuberculosis could be abandoned without giving the chest a careful examination. He had made use of the X-Ray in this case, and the skiagraph exhibited corresponded to what Dr. Morris had described in the clinical history. From the clinical history, the character of the sputum, the general condition of the patient, there was no difficulty in making an absolute diagnosis of dermoid cyst communicating with the lung. He resorted to a surgical operation for the purpose of exposing, if possible, and removing the lining membrane of the dermoid cyst. Clinical records showed at the present time almost invariably that these cysts had their location in the anterior mediastinum at a point corresponding with the location of the thymus gland. This was their favorite primary location. He therefore aimed in operating upon this patient to expose that portion of the mediastinum which is most frequently the seat of dermoids of the lung. He made a T-shaped incision, which remained well-defined by the scar which followed as soon as the wounds had healed, largely by primary intention. He made a transverse incision directly over the manubrium, and a vertical incision over the center of the sternum. As he wanted to trephine the manubrium at a point corresponding with the location of the thymus gland, he made another or second opening two inches lower down, after reflecting the cutaneous flap and periosteum, which were separated from the sternum, and united these trephined openings by the use of a chisel, thus making an opening more than two inches in length in its vertical diameter, exposing freely that part of the anterior mediastinum which was generally the seat of dermoid cysts. The moment he opened up the anterior mediastinum by cutting through the posterior layer of the periosteum, air entered forcibly. Hemorrhage was quite profuse. He enlarged the opening to correspond with the size of the trephine openings, and this exposed freely the anterior mediastinum. Owing to profuse hemorrhage, he packed the large wound with iodoform gauze, and allowed the gauze tampon to remain for five or six days, when it was removed, and when he anticipated, in all probability, he would find the remains of the dermoid cyst in the expected location. In this, however, he was disappointed. In removing the tampon he found that the entire part of the anterior mediastinum which was exposed lined fairly well with granulations. He proceeded to explore the floor of the wound with the probe, but no trace of the dermoid cyst could be found. The operation had not influenced the clinical course of the disease. Before resorting to operative measures, and knowing nothing about the previous history of the case, for the purpose of locating, if possible, the dermoid cyst accurately, he

resorted to exploratory punctures. He found, as did Dr. Morris, an area of dullness corresponding with the upper segment of the sternum and at the base of the heart. He explored about an inch and a half from the left margin of the sternum and a little above the base of the heart to the depth of three or four inches, resorting to aspiration, gradually withdrawing the needle, but the result was negative. He found likewise a limited area of dullness which corresponded with the intrascapular region, that is, between the spinal margin of the scapula and the transverse process of the spine. In this locality he punctured, but with a similar negative result. The patient coughed now about the same as he did before the operation, so that the question arose as to what was to be done in the future. He exhibited the patient with a view of asking the advice of the members of the Chicago Surgical Society as to the course to be pursued in the future. He could do nothing more with the anterior mediastinum. The patient had a slight area of dullness extending over the base of the heart, with a similar area of dullness on the posterior surface of the lung. He thought he had to deal here with an exceptional case. In nearly all, if not all, cases of dermoid cyst of the lung it was found to take its origin in a location corresponding with the thymus gland. That part of the mediastinum had been thoroughly explored. Nothing was to be gained by repeating the operation in that locality. He took particular care to use a probe in all directions in search for a possible sinus communicating with the supposed original seat of the disease.

The question arose now, should he resort to costal resection at a point to which the patient referred his difficulty, namely, above the base of the heart, or should he, in view of the fact that distinct physical evidence of pulmonary complications, or, at least, pleural thickening over the posterior aspect of the chest had been found, operate in that locality? He had kept the wound open for a number of weeks with a view to studying repeatedly the condition of the anterior mediastinum, which was exposed by the operation. The arch of the aorta could be seen in the lower part of the wound. The operation wound had now completely healed, yet the patient was in the same condition as he was before operation.

Dr. Senn passed around some of the hairs which the patient had expectorated at irregular intervals. One of the hairs measured six inches in length.

He also reported cases of (1) echinococcus cyst of the lung; exploratory puncture; rupture of cyst. (2) Dentigerous tumor of superior maxilla. (3) Ligation of internal and excision of external carotids for malignant disease. (4) Disarticulation at the hip joint for sarcoma of femur and tubercular endovaginitis. (5) Extensive plastic of the face after operation for carcinoma of the orbit, nose and face. (6) Rectoplasty for extensive traumatic defect. (7) Scar carcinoma in the region of the great trochanter. (8) Fracture of humerus with posterior dislocation of upper fragment. (9) Secondary suture of ulnar nerve after gunshot injury.

The Surgical Treatment of Chronic Mucous Membranous and Ulcerative Colitis; with Special Reference to Technique.

Dr. J. E. Summers, of Omaha, Neb., read a paper on this subject by invitation. The author first discussed chronic primary colitis; then primary membranous colitis, and ulcerative colitis, and reported cases.

After referring to the work of Keith, W. Hale White, Deaver, MacEwen, Cannon and Lane, the author stated that in order to cope successfully with the different kinds of colitis the surgeon must, in so far as possible, be able to differentiate the cases and apply the surgical procedure to fit the cause. This is rather new surgery, but has a field of usefulness. Any form of colitis which has resisted careful medical treatment must be studied with a view of determining the cause and the reasons for the persistence of the cause. For surgical convenience he recognizes three kinds of colitis: (1) The inflammatory, due to the effect of some specific organism—an inflammatory disease commencing in, and mostly confined to, the colon. (2) An inflammatory condition secondary to an inflammation or derangement of function of the vermiform appendix. (3) An inflammation induced by mechanical interference with the peristaltic, and more especially the antiperistaltic waves of the colon.

The surgical treatment of colitis, if carried out in recognition of these causes, will be successful. To be successful, the type of operation must be selected with a view to meeting the pathology. It will not do to confine oneself in all cases to a right inguinal colotomy. This may have done for the class of cases for which it was first selected, but even in this class, which the author designates the bacteriological, the artificial valvular fistula operation suggested by Gibson of New York has many advantages, not the least being the annoyance of a large open fistula, and the inevitable loss of weight and strength which always follows the free external discharge of chyme as it comes direct from the ileocecal orifice. In his experience with the appendicular forms of colitis, there are two varieties—first, and most common, the explosive form, which is recognized in the first few hours by intense general abdominal pain, with tenderness over the appendix. In from six to twenty-four hours dysenteric symptoms develop, which may last some days, and then gradually subside or persist with moderate symptoms for several weeks. These attacks recur. The other form is of the kind described by Deaver. In the first kind the removal of the appendix is all that is required, as has been so in three of the author's cases. In the neurasthenic type of Deaver not only should the appendix be removed, but the Gibson cecal fistula ought to be established—the long-continued interference with cecal and colonic digestion by the abnormally functioning appendix has brought about changes in the mucosa of the colon that can only be cured by the rest and local treatment afforded through this fistula. If these simple means will not bring about a cessation of the discharges, and the impaired health which always accompanies them, then

something further must be done. The colon must, in greater or less part, be excluded from the process of intestinal digestion and the function established gradually by the small intestine and the remaining portion of the colon. Operations for exclusion have undergone a remarkable evolution.

Drainage in Diffuse Septic Peritonitis.

Dr. Van Buren Knott, of Sioux City, Iowa, read a paper by invitation on this subject, in which he drew the following conclusions: (1) Operations for diffuse septic peritonitis should be made as quickly and with as little manipulation as is compatible with thoroughness. (2) Evisceration, partial or complete, greatly increases shock and the prospects of a fatal result. (3) The general use of clean hot water will most thoroughly cleanse the infected cavity with the least traumatism. (4) Drainage is simplified by collecting the peritoneal fluid at one point where drains may be easily placed. The elevated head and trunk posture followed by the gravitation of fluid to the lower pelvis best accomplishes this. (5) Results following the surgical treatment of diffuse septic peritonitis will be improved should each individual operator adopt some definite form of procedure in such cases which, being well understood by operator and assistants, may be methodically, speedily and thoroughly carried out.

These two papers were discussed jointly.

Dr. M. L. Harris said his experience as to exclusion of portions of the intestine had always been limited to exclusion with drainage into the intestine. He has resorted to this method in several cases in which the cecum and ascending colon were involved, and always with success. He has always made use of the method of dividing the ileum and transplanting it into some portion of the colon distant to the trouble which he sought to relieve. The colon was always left free, so that it could drain. He believes this is an essential feature, and thinks that complete exclusion of any portion of the intestinal tract should never be undertaken.

Dr. Jacob Frank said, with reference to exclusion of the bowel, in some of the cases reported before the Society, it was demonstrated that in that part of the bowel which was excluded there were masses formed from the secretions or excretions from the mucous membrane. These masses consisted of small balls of cheesy substance, filling up the excluded bowel. He does not think it is safe to close up both ends, as he has demonstrated this in dogs. He has specimens at home of these cheesy masses which he intended to exhibit at a future meeting of the Society.

As to Dr. Knott's paper, he had tried the method mentioned by him, and in two cases of diffuse septic peritonitis he filled the abdomen with salt solution, put the patients in the Fowler position, and used glass drainage tubes, sitting the patients up in bed with a back rest, and both recovered.

Dr. Daniel N. Eisendrath showed the photograph of an apparatus which has been in use in the Michael Reese Hospital for the past two or three years for the treatment of cases of diffuse septic peritonitis. This apparatus has

advantages over using tables, chairs, etc., as one can more accurately get the Fowler position. It is an advantage over propping up of the patient in bed, for those who have had experience with such patients know that in their weakened condition they would slip down. About a year ago, when he began to use the Fowler position systematically and to flush cases of diffuse septic peritonitis thoroughly with hot salt solution, using three to four gallons in each case, he changed his mortality from 100 per cent practically to a large per cent of recoveries. He cited three cases of diffuse septic peritonitis that had recovered from this treatment.

Dr. Alexander Hugh Ferguson said that in a spreading inflammation of the peritoneum one should not forget where the focus of the inflammation was when he begins to drain. The Fowler position, which has been so much lauded and recommended, should not supplant every means of drainage of the abdominal cavity. He mentioned three positions from which the pus emanated that should not be drained by the Fowler position.

Dr. Knott, in closing the discussion on his part, said, with reference to the remarks made by Dr. Frank, he believes in the long run Dr. Frank would secure better results, afford more comfort to his patients, with less tendency to fecal fistula, by the use of soft rubber tubes than by the use of glass tubes.

Dr. Summers, in closing the discussion, said that his experience had been limited to eight operative cases. He did not know that Dr. Harris had been doing the operation of intestinal exclusion with drainage into the intestine. He was not aware of it, because Harris had not published his work.

With reference to Dr. Knott's paper, he would say that Dr. Knott was so thoroughly convinced of the utility of the plan advocated in treating cases of diffuse peritonitis, that he operated upon his own son, eighteen hours after an operation for perforative appendicitis by another surgeon. Dr. Knott had himself operated in the absence of a colleague, an acute peritonitis having developed. The extra-median incision, toilet and drainage established, saved the boy's life.

DOUGLAS PARK BRANCH OF THE CHICAGO MEDICAL SOCIETY.

Regular meetings are held on the second Monday evening of each month at Gads Hill Settlement; Roby and 22d St. Membership —.

Officers.

President.....J. Chase Stubbs, 971 W. 22d st
Vice-President.....J. F. Chvatal, 1593 W. 22d st
Secretary.....Clyde D. Pence, 1389 Ogden ave
Treasurer.....Wm. E. Miller, 1155 S. California ave
Councillor.....J. A. Clark, 832 W. 21st st

Shall the Physician Dispense?

Dr. J. A. Clark: This question cannot be answered off-hand to apply to all physicians. So much depends on the personal equation of the man, on his surroundings and influences. Knowledge of drugs—liking for the work, facilities for handling and making preparations.

Almost as well might we ask the question. Shall the doctor wear a certain style of hat or

coat, drive a certain colored horse or use a certain make of automobile?

I shall make no attempt to speak in a dictatorial manner as to what is, or what is not best for all physicians. But I shall give some of the reasons why I believe it is best for the physician to do his own dispensing, some reasons why I think it is best for me, and why it is more satisfactory to me. After trying both ways; that of writing prescriptions, and doing my own dispensing.

I do not expect everyone to agree with me in this matter. I am very sure the retail druggists do not share my views; neither do all physicians agree that dispensing is the better system. Any one who has thought of, or investigated the subject at all must know, that in the last ten years the plan of dispensing has made immense gains all over this country, and that every year the number of physicians who are coming into this way of doing business is growing by leaps and bounds. For this fact there must be some reason.

As a basis for my remarks I wish to lay down some fundamental propositions. 1st. That no person should attempt to enter the ranks of our profession who has not a genuine love for his work and 2d whose entire efforts during all his professional life shall be to this end, that he cure his patients as quickly, as safely and as pleasantly as possible, and in incurable maladies to give the most relief from suffering, or as stated in the ancient oath of Hippocrates, which was taken by the physicians of old.

"I swear by Apollo the physician and Aesculapias, and health and all heal, and by all the gods and goddesses, that according to my ability and judgment I will keep this oath and this stipulation."

"Into whatsoever houses I enter I will go into them for the benefit of the sick, and I will abstain from every voluntary act of mischief and corruption."

In the 2400 years that have elapsed since that oath was written no code of ethics has ever been written which is any improvement upon it as a lamp and a guide for our direction. Some principles are eternal because they are right, and nothing ever has, or ever can change the fact, that the life work of the real physician is to labor for the benefit of the sick, and that practice is best which saves the most lives and cures quickest and safely.

The second main proposition I lay down is: That having done our full duty to our patients, our patients have a duty to perform towards us and we must see that they do it.

While the world may owe us a living, practically we have to collect it ourselves from the aforesaid patients. It is our duty to collect it for the benefit of ourselves and our families. Somewhere I have read that he who fails to provide for his family is worse than a thief.

I take it that we here, are all what are known as general practitioners: doing every thing that comes in a general family practice, and that we expect to live by giving service to these families year after year: we expect to hold

our families and have our business and our income grow by the good reports our patients give to their friends, and so form an endless chain.

I am sure that a very potent factor in holding our patients is by doing our own dispensing. You will find that the patient likes it better.

The first element of success is a satisfied patient. In all my life I have never had a patient ask for a prescription when I had the remedy with me to dispense, but times without number have they asked me to give them their medicine, and told me they had more confidence in the medicine when the doctor gave it himself. There was then no fear of substitution. The druggist, his clerks and some favored doctor have no chance to discuss the patient's disease, give unasked for advice, and retail gossip.

As most people are sensitive about their ailments, and as remedies often indicate the disease for which they are prescribed it breaks into the confidential relations existing between physician and patient to have the prescription discussed by outside parties.

By dispensing your own remedies you often save hours of time to your patient and gain the same number of hours in the treatment. This may mean saving a life in acute diseases. But last week one of my patients waited all day to have a prescription filled because the druggist was out of the remedy ordered, and had to send to the wholesale house for it. While I honor and respect this druggist for going to all this trouble to fill my prescription right, had the case been one of great urgency, likely my patient would have died before the medicine was delivered.

Dispensing saves your patients money. You all know that the actual cost of the drugs used in acute diseases amounts to only a few cents a day.

The complaints that were the most common to hear were about drug bills. The bill of the physician is often a small matter compared with the drug bill. You always know just what your patients are getting.

They are obliged to report to you instead of to the drug clerk.

They cannot get the medicine repeated month after month whether suited to their needs or not. You have absolute control of your patients and of your own business. You will use better drugs yourself than you are sure of getting at the ordinary drug store. The drugs you use are as much a part of your armament as your scalpel, your obstetrical forceps or your microscope and they should be much more carefully selected. You use drugs a hundred times where you use forceps once.

The best and purest drugs are none too good for my patients.

You have a better chance to watch the effect of your remedies and you will become a better therapist yourself.

Called to a case, you administer the first dose yourself, and watch the effect; often give two or three doses before leaving and many times the patient is on the road to recovery before your first visit is over. Your patients will recover from acute diseases in much less time. Your death rate in the same class of cases will

be so much less than formerly that you will be greatly surprised.

Last month I was asked by a man whose family I have treated for many years, how my results compared now as with my former practice of writing prescriptions.

My answer was that now, in the same class of diseases, of the same average grade of severity, the patients recovered in from one-half to one-third the time it took under the method of prescription writing. The death rate has decreased in a much greater proportion.

I am entirely within the limits of truth, when I say, my death rate now, in acute diseases, is not over one-fifth of what it formerly was, and I attribute this improvement to using physiologically active drugs, those I can use with confidence and in whose activity I am not disappointed.

Up to about ten years ago I might have been classed as a therapeutic nihilist. I had been so often deceived and disheartened over the results from my prescriptions that I had come to believe that recovery was largely a matter of good nursing and vitality of the patient, and that medicine was of secondary or no importance at all, and that the only real results we ever got were in surgical cases. Gradually the idea came to me to do my own dispensing, to study up carefully the physiological effect of every drug used; then watch for the effect every time I prescribed a remedy, and if I didn't get the physiological effect to try and find the reason why I did not get it. I soon learned that the products from the different manufacturing and pharmaceutical houses varied tremendously, and while one remedy from a house would prove true to action every time some other drug from the same house would be practically inert. This happens with the drugs of most of the largest and best known manufacturing drug companies. Every firm has some specialty which no other house seems able to more than imitate though they try to produce the same.

Some time since I had a 10,000 bottle of hyoscyamine tablets made by one of the largest and oldest houses in the United States, but I could get no adequate effect from the ordinary doses. I soon learned I had to give five times the dose from this bottle that I needed to use with the same sized dose made by another house. Now had I been writing prescriptions for this remedy, to be filled at any drug store, how would I have known what dose to prescribe?

No matter how honest the druggist when he buys from an old reputable house, he can not be blamed. It is not his business to watch the effect of drugs he buys.

I have learned by sad experience that even when we have found the particular house making the best drugs, and specify that make, it is very seldom we get what is called for, and this is especially true when your prescription is made into a solution the opportunity for substitution is great in liquid preparations.

These objections might be met if the physician owned an interest in a store and controlled the buying, and if he could be sure all his prescriptions would be filled at this store. But the

courts uniformly hold that when a prescription is once delivered to a patient it becomes his property, with which he can do as he pleases; have it filled where he likes and repeated whenever he likes; all orders written by the physician about not repeating notwithstanding.

In the course of time most of us evolve some pet combination for certain diseases. These combinations are in the nature of private property. We do not particularly care to make them public property. Most of the millionaire patent medicine men made their money through pushing the prescription of some doctor.

I wonder how many drug stores there are in which some doctor does not have the privilege of going through the prescription files?

The only way to control abuses is by keeping our combinations in our own hands.

Again, many preparations can not be made extemporaneously. I am told by manufacturing chemists that it takes a month to make the ordinary comp. syr. of Hypophosphites. That it takes so long before it is fit to be put on the market. I have for a long time used a modified hypophosphites in which the dose of lime is very much increased over the officinal preparation. Now if it takes a large manufacturing firm, employing the best chemists, and with every known facility for doing the work, a month to make a product they are willing to put on the market, what kind of a mixture would you be apt to get from an extemporaneous mixture put up in twenty minutes?

The following statement was recently made in a lecture before a body of prominent physicians:

"The reputation of the physician, and in equal measure his income are in the keeping of his pharmaceutical purveyor, and he is practically helpless except in that he can charge or control the source of supply at will." This truth is evident when it is remembered that the physician who writes the prescription seldom or never sees the medicine dispensed.

A case was recently told me of a young physician settling in a city near here.

Every prescription written by the new doctor was shown to all the older doctors in town and criticized to the public so harshly as in a short time to drive the young doctor out of town.

I do not mean to imply that all druggists are open to these criticisms. It is my pleasure to know some who are competent, conscientious gentlemen, but the exceptions are so numerous. I am not willing to trust either my reputation or my finances in their keeping.

The following taken from the Apothecary, a druggists journal, affords some food for thought:

"The facts revealed by the recent aristol investigation in Chicago are horrible in the extreme. Almost shattering ones faith in mankind. When 108 out of 139 supposedly reputable druggists are known to be criminally negligent if not willfully criminal it makes one sick with disgust."

These are strong words, but not so strong as the facts warrant. When a druggist, a pretender to professional standing, a claimant to at

least ordinary intelligence allows Fullers earth colored with oxide of iron to go into a prescription for aristol, as many of these men did, there is no excuse for him. True most of the druggists assert they bought the stuff in good faith. That is, they admit they knew it was a substitute but thought it was just as good. Think of it! The pitiable spectacle a man makes in offering such an excuse. As another evidence of the extent this fraudulent stuff was sold it is said that one jobbing house in one day sold 429 ounces, more than before in months. If the fact that the investigation was being made had not leaked out it would have included every drug store in the city.

From government reports in the last Year Book of the Department of Agriculture, we read that from 50 to 75% of the medicines dispensed by the druggist are either wilfully adulterated or are of inferior quality.

Samples of laudanum varied 500% in strength and other drugs in the same proportion. The solid extract of Nux Vom should contain 15% of the alkaloid. Samples analyzed by Prof. Wulling contained not a trace of the alkaloid instead of 15% they should have had.

Did any of you ever examine and taste a large number of the ordinary fluid extracts and notice how much alike they all taste?

A peculiar bitter, stale, dirty taste entirely lacking in the special aroma and taste peculiar to the green plant. Instead of the extract being made from the recent herb it is more often made from the dried, inert plants gathered from any source, by anybody, at any time of the year. Plants from which the entire principal is evaporated.

Suppose a physician uses an extract like the above in gradually increasing doses and fails to get any effect. Is it any wonder physicians lose faith in drugs?

While I yield to no man in my appreciation of the benefits of deep study of pathology, bacteriology and chemistry of diseases, the practical end is the cure, and excluding surgical cases this must largely be done by the action of drugs. I am certain that the man who gives his own medicines will and does become a better therapist than the one who writes prescriptions. When you give a dose of medicine and do not get the result, you have no druggist to put the blame upon. You know your own supply is defective and you must change the source of supply.

Every agent who takes an order from me knows that prices have no effect unless their products are true to physiological action and they also know they can never sell me a second lot of any product not true in action.

I watch as I never did before the action of every drug I use and I am getting to be a very firm believer in the efficacy of drugs. I believe my experience is large enough so that I can make the statement that acute diseases are very much benefitted and shortened by treatment. I know it is contrary to some very high authority, but I am bold enough to assert that such diseases as pneumonia, typhoid fever and whooping cough are shortened and cured by drugs, prop-

erly given, at the right time, and in doses suited to give physiological results. The Lord pity the pneumonia patient who falls into the hands of a doctor who does not believe in treatment and has no faith in drugs.

I will go further and write myself down as enough of a heretic to say, that all cases of appendicitis not of the acute fulminating type, are relieved and cured by medical treatment.

I venture the assertion that the therapeutic agnostics in the profession today are all prescription writers.

As a result of German Nihilism many of the leading text books on the practice of medicine are but little more than text books on pathology. In looking through one of the latest and most popular works I was not so much surprised to read pages on diagnosis, etiology, pathology and then to find the treatment disposed of in a short sentence.

The question is often asked why medical students do not know more about therapeutics? It is true most of them are anxious to learn what to do for diseases, yet they are graduated without practical training in the use of remedies. Too little demonstration of the practical working of drugs either on animals or on patients is given.

The student is surrounded by three fires. The laboratory professor fires at him all day quantities of chemical unknowns, bottles of bacteria, and pathological specimens by the pound. The clinical teacher wants the student all day that the teacher may demonstrate his own brilliant surgery or deliver his lecture on history, etiology and pathology, and each specialist is sure the student should devote all his time to that particular specialty. Thus it comes that the only time the doctor learns real therapeutics is after he is in practice: at the bedside of his own patients and I maintain that he will learn very much more and very much faster if he supplies his own remedies, procured from a reliable source every time.

And after all, isn't it infinitely more satisfactory, more scientific, more in keeping with the doctor's high calling, to himself give such medicines as are needed for the really sick? Active remedies for serious conditions should be given by the doctor himself, and he should explain their use and the action that will result from their use. Thus you combine all the therapeutic efficacy of your remedy and add to it the powerful psychological effect of suggestive therapeutics.

There is a right way of doing things. It is quite evident that in medicine to write a prescription to be dispensed from an uncertain source of supply is not the right way.

To those who have had experience it is equally evident that besides dispensing of active remedies is the right way. No possibility of substitution or sophistication then; no uncertainty as to efficiency or potency.

Does it pay?

When we have done to the best of our ability, our whole duty to our patients, we must look to our own welfare. I know not how it is with others, but I know my families like the system of

having the doctor do his own dispensing. There is an element of faith in medicine. Whether well or illfounded there is in the minds of many people a suspicion as to prescriptions being filled as the doctor directs. Among the poorer classes the item of drug bills in a long illness is a serious matter. In many a case have I seen the druggist get all the money the family had and I either waited a long time for my pay or never got it at all. I have never seen bills so easy to collect as since dispensing.

It is the best system I know of for making office consultations and visits cash. So many never think to pay cash for a consultation or a prescription, but when they also get a bottle of medicine or a box of pills, they feel they have received something of definite value that calls for payment on the spot.

You can get better fees for your work. It is the most practical way of raising fees. Thereby getting more for your own services and at the same time save your patients a great deal over what they would pay at the store.

The matter of experience is small. Contrary to general belief, we buy as cheap or cheaper than the druggist. He buys pills in lots of 100 to 1000. Those I use in any quantity I get in lots of 5,000 to 100,000. The difference in price between 100 lots and 100,000 lots will open the eyes of those who have never investigated. It will increase the business and cash receipts of any physician who gives it a fair trial.

Last year my collections were so nearly cash that I only had $7\frac{1}{2}$ per cent of business done in 1904 to be collected at the end of the year.

If you don't want to lose your business, fit your office to do the work. There is a demand for business doctors. Those who make a business of their profession and all that pertains to it. The more business like the doctor, other things being equal, the greater will be the demand for his services and the greater his rewards.

Blessed is the man who makes two dollars grow where only one grew before, and no where is there more room for the extra dollar than in the doctor's pocket.

In conclusion: There are four good reasons why the physician should dispense; any one of the reasons alone would be sufficient:

1st. Your death rate is very materially decreased, thus saving more lives to the State.

2. From the use of better drugs, and the added interest you take in your cases they recover in much less time: a great economic gain to your patients.

3. Under all circumstances your patients like it better.

4th. It pays the physician by increasing his fees and by increasing his cash collections.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY.

A regular meeting was held March 7, 1905, with the President, Dr. William L. Ballenger, in the Chair.

New Knife.

Dr. Ballenger showed a knife of his own de-

sign for removing the cartilaginous septum. He also exhibited specimens which were removed by this knife, and said the method of removal with this instrument preserves the specimens in their entirety for study.

Plastic Operation for Stenosis of the Nares.

Dr. F. G. Stubbs: I have a case here which I wish to present, not that there was anything peculiarly difficult about the operation, or that there is anything that is specially rare; for many times in our practice we see cases of stricture of the naris, but when we see a case in which both nares are almost completely occluded, as in this case, I think it is more than of ordinary interest.

This young man is twenty-three years of age, and the trouble began when he was between one and two years of age. There is a history of hereditary specific trouble, and the probabilities are there were ulcerations in the nares. His eyelids were affected, so that some years ago he underwent an operation of canthoplasty. Whatever the condition at that time may have been, there resulted a stricture of both nares at a point corresponding to where the bony opening of the nostrils is, about half an inch from the external opening of the nose. These strictures formed evenly, so that the opening was almost in the center on either side; on the right side the opening was only two millimeters in diameter; on the left side, three millimeters in diameter. Being so small, you can readily see the patient has been unable to get sufficient air through them, and has been a mouth-breather all his life. Neither could he blow his nose; and the secretions would accumulate there, become thickened and crust-like, the same as we see in cases of atrophic rhinitis. This condition persisted up to the time I saw him, last November.

In this case I did the operation which Roe has described, although Roe simply adopted well-known surgical principles. Where you get two surfaces resting together without any normal skin between them they will grow together. In operating on a stricture of the naris it is similar to operating on a syndactylic finger, where the webs extend down the fingers. In operating simply by slitting that up, you will get no result as they will immediately grow together. The same way with reference to operating on a stricture of the naris; consequently the important thing is to interpose between the two raw surfaces a mucous membrane (here Dr. Stubbs went to the blackboard and described the operation he did in the case).

I would like to say I did this in four stages—operated first on the lower half of the right side, then on the lower half of the left side, the upper half of the right side, and the upper half of the left side, with an interval of ten days between each operation. I first made a flap of the lower lining mucous membrane of the stricture, its point of attachment being the external middle point of the opening. Then the anterior lower wall of stricture was peeled up, its point of attachment being on the floor of the nose. With these flaps drawn away the connective tissue

entering into the body of the stricture was now dissected out flush with the floor and external wall of the nasal passage. The flaps were now allowed to fall into place and held there by one or two stitches in each one as was found necessary to accurately hold them in apposition. The only spot not entirely covered by these flaps was a small area on the septal side of stricture where the flaps could not reach after falling down to cover the floor of the nose, but this denuded area does not make any material difference for the extension of mucous membrane onto same takes place rapidly without the danger of subsequent contraction. In ten days the same thing was done on the opposite side. Twenty days later I did practically the same thing on the upper half of the first side. It only varies in that the angle of the union of the septal and lateral walls must be thoroughly incised and well and carefully lined with mucous membrane or otherwise the success of the operation will not be complete. Later this was done on the remaining portion and now both sides were completely relieved of all stricture. To illustrate: If the naris were that size ordinarily (indicating), we now have an opening which comes flush to the surface of the septum internally, flush to the outer external nasal wall, but not quite flush with either the floor of the roof, for at these points we meet with the greatest difficulties in the operation and it is here that any cicatricial contractions will narrow the opening. In this patient we have succeeded in restoring practically all of the diameter of the naris, which was the least strictured, and about seven-eighths of the other.

At points on the external sides of the nose corresponding to the positions of the strictures internally, you can see where there were two extremely deep grooves where these strictures had drawn the alae of the nose inward.

As I first operated on the lower half, these deep depressed lines were unaffected because the stricture was not freed from above; but as soon as I operated on the upper half, relief was afforded. On the left side of the nose it is now smooth. On the right side there is still a little line, because here it is not quite as satisfactory in its results. At the same time, these lines which you see externally had drawn the bridge of the nose in, so that there was a saddle-back. That I shall have to correct with paraffin, and the only thing now left is that the tip of the nose is drawn down some. If, after wearing an artificial device to support it, it is not satisfactory, I will cut the cicatricial tissue which holds the nose down and either transplant a skin graft from the leg or, if necessary, move up a little flap from the lip. In this way we will succeed in giving him a fairly good nose. Before, it looked like a flat or frog nose against the face.

And yet the operation was not undertaken primarily for the cosmetic improvements, however much it may have been the determining factor for the patient. The pressing indication was to relieve the mouth-breathing and remove the grave menace that existed for the establishment at any moment of any of the various com-

plications of such a "stopped-up nose" i. e. sinus troubles, and catarrhal troubles of the ears.

Tuberculosis of the Larynx.

The other patient I intended to show has not arrived. I was in hopes that she would be here, so that you could see the larynx, and while it is not so much a departure from the ordinary tubercular larynx, it is interesting in this respect: Nearly a year ago the patient began to have sore throat, and later pain on talking, and still later pain on swallowing. She consulted her family physician, who gave a gargle, and that not relieving her, he gave a stronger gargle, which even burnt her throat without affording any relief. I saw her about the end of November, and in making an examination I found the epiglottis swollen and edematous. The vocal cords were seen in a limited spot near the posterior attachment, the remainder of the cords being covered by the swollen, edematous ventricular bands.

The patient presented the appearance of one having tuberculosis; on account of not being able to swallow without considerable pain, she almost starved herself, and had lost from fifteen to twenty pounds in weight. I immediately began the application of astringents and also the use of lactic acid, and in ten days the pain had so far disappeared, also swelling, that she was able to eat as freely as ever. At the end of a month she regained her normal weight. At the time I first saw her, I made an examination of the lungs and found nothing abnormal. She is now in the condition she was about a month after I began treatment. She is the picture of health. I have examined her lungs several times, and up to the present time I have not been able to demonstrate anything wrong with them. There has been no bacteriological examination made of the sputum, because she has had no cough and no sputum. As the edematous condition disappeared, it left tubercular nodules forming a horseshoe-shaped irregularly nodular swelling confined to the ventricular bands. I removed four-fifths of them by the oral route, and applied full strength of lactic acid after each removal. As to the condition now, the ventricular bands are slightly enlarged or thickened; the vocal cords are seen in their entirety; they are losing their redness, but are still thickened. Her voice is a little husky, but almost normal compared with what it was at the beginning.

I sent a specimen of the tissue removed to the Columbus Medical Laboratory, and they have reported that it was tubercular. While they found no tubercle bacilli, they did find giant cells, and the arrangement of the cells was such as to leave no doubt of its tubercular nature. Of course, we cannot say that this is absolutely a case of primary tuberculosis until a post-mortem examination is held, and the entire body is gone over when we may find a latent tubercular focus somewhere not in the larynx. She gives no evidence of tuberculosis in any other part of the body clinically. There is no tubercular history in the family. I am sorry the patient is not here. I would like to have you consider this a preliminary report, as

I intend to follow the case up and eventually report whatever may disclose itself in the fullness of time.

Dr. Joseph C. Beck read a paper entitled *Some of the Newer Remedies.* (See page 419.)

Discussion.

Dr. E. Fletcher Ingals: This is a most interesting paper, and a very valuable one.

In reference to four or five of the remedies spoken of, my experience has not been the same as that of the author. Take, for instance, anesthesin. I have not used it in the oily preparations as he has done, but in powder form, and while occasionally it has acted as a good anesthetic to open wounds, sometimes it has seemed absolutely worthless, and has fallen into disuse. It would seem to me not to be a satisfactory remedy. I am glad, however, to find that it is as satisfactory as the author of the paper has found it. Perhaps used in the oily preparation it would be more satisfactory, and I would like to ask in what kind of oil or oily preparation it is dissolved.

The explanation of the essayist in regard to adrenalin causing ischemia of the nasal mucous membrane and marked ischemia of the meninges does not seem to me to be satisfactory, for my observation has been that it causes ischemia simply where it touches the line of demarkation, the part where it is applied, and the region beyond is so very sharp that it does not seem to extend any distance beyond, probably not more than one-eighth of an inch in any case when the drug is applied to the nose.

As to bromotone, I used it considerably a few years ago, and in several cases obtained fairly good results from not more than five grain doses. The author of the paper, I understand, used it in fifteen grain doses with satisfaction. I find five grains, three or four times a day, sufficient for most cases. The majority of them will not or cannot tolerate as much as seven and a half grains at a dose.

Dr. Beck said that he uses aspirin in doses of ten or fifteen grains. I have used this drug considerably; I have tried to take it myself, and I find I cannot take three grains, three times a day, without giving me a great deal of discomfort. A dose of ten or fifteen grains would be annoying to many patients.

My experience with pollantine has been a good deal like that of the essayist. I have used it considerably, but as I am usually out of the city during the hot season, I see hay fever patients who come early and late, and I have never seen but one patient in whom it seemed to do any good. I have tried it in quite a large number of hay fever cases. I have a patient, a policeman, who was affected with hay fever, and I gave him pollantine, and the next time he came back he told me that he never had anything that did him so much good in his life. I felt that the agent had done this patient great good from what he said; but a few weeks later he was unrelieved, became disgruntled, and did not make a final report. I do not think, however, I have given pollantine a fair trial. I have not used it as it has been recommended, namely, putting the patient in a dark room, keeping him

out of the dust and away from flowers. If we did that, most patients would not have hay fever anyway, and it would add to the reputation of the remedy.

Dr. Norval H. Pierce: Regarding the first remedy mentioned by the essayist—*anesthesin*; I have tried it in well-marked cases of painful, acute pharyngitis with varied results. In one case especially I remember, on examination nothing could be seen but an area of intensely red and somewhat edematous tissue around posterior and upper surfaces the arytenoid bodies. This case I am especially mindful of, as I then thought it one that would prove the worth of the remedy. The patient was a nervous woman, who was kept awake for a number of nights on account of this painful condition of the throat; she kept constantly swallowing. I used *anesthesin*, carefully blowing it down on the affected area, but without any result apparently. In the itching of the external auditory canal, I have thought that it produces some benefit; but in very many of these cases the itching will disappear or become much better by the simple application of *vaseline*, containing no medicament whatever, to the external auditory canal, and it would be difficult to decide as to whether the amelioration of the itching was due to *vaseline* or to the *anesthesin*.

There is a very interesting question in my mind regarding *adrenalin* lately, as to whether *adrenalin* is as efficacious as formerly. Lately, in operating on deflected septa, I have gone to the trouble of procuring fresh solutions for each operation, and in several instances recently I have been very much disappointed in its ischemic property; in fact, the last preparation I used seemed devoid of ischemic properties. I do not know whether the other members of the society have noticed this or not, but surely I have.

Regarding *iodo-nucleoids*, I must say I was somewhat prejudiced against this preparation when it first came out, or rather believing it had no particular superiority over the other iodides. But I came across the case of a professional singer, with late secondary symptoms, who declared that he could not absolutely take iodides. He had been treated in France, and they had there given up the use of iodide of potassium and iodide of sodium completely, on account of their peculiar effect on the vocal cords; that is he lost his voice immediately on taking the iodide, so that he could not sing at all. He could take *iodo-nucleoids* in twenty grain doses, four times a day, without any bad effect whatever; and I have seen other cases in which I believed that part of the peculiar property of this remedy was in not producing the irritative effects of iodide of potassium and iodide of sodium. They surely produce as good results as the other iodides. I am quite convinced of that.

I have been somewhat disappointed in the use of *pollantine*; in fact, I have not seen a case that has been absolutely cured, and inasmuch as the remedy is actually worth its weight in gold, I believe that it is prohibitive in the large majority of cases. It seems to have a

palliative effect, but I believe almost any powdered serum, and especially diphtheria serum, will produce the same effect as *pollantine*. I must say that this pure speculation marked a single observation, but I am going to experiment in this direction during the coming year, and I hope that this idea will be taken up by few of my colleagues we can easily procure powdered diphtheria serum, mix it up with sugar of milk, in given quantities, and apply it to the nose as we do *pollantine*.

As regards *eucaine lactate*, I would say that its local application is not satisfactory in the majority of cases, although occasionally it will produce local anesthesia. Injected submucously, it will produce invariably satisfactory anesthesia, and I use it almost entirely now in the excision of tonsils.

Dr. O. J. Stein: As to the Dunbar preparations for hay fever, the results I have had with them in my work have been somewhat satisfactory. In twenty-six cases, recently reported before the Chicago Medical Society, I tried to show that the results were such, when the remedy was used as a prophylactic, pure and simple, as to prove all that was claimed for it. As a remedy *per se* for the attack, I doubt whether I have ever obtained any good results from it. But used very early in the morning, before the patient leaves the house and at the onset of the first sign or symptom of the disorder, every one of my cases, excepting three, were prevented from having an attack or had a positive amelioration of the symptoms that were coming on.

Dr. F. G. Stubbs: I have used *alphazne* considerably in the last four months. My attention was drawn to it from the fact that I noticed it was claimed to be a substitute for hydrogen peroxide. As it is an oxidizer without the effervescent reaction, such as we get from peroxide of hydrogen, it appealed to me that it should be of service where we wanted an oxidizing action of that kind, in sinuses or in ear conditions, and as Dr. Stein has said, I have had satisfactory results with it in suppurative middle ear cases.

Dr. Beck (closing the discussion): In answer to Dr. Ingals' first remark, about *anesthesin*, the literature on the subject shows plainly that it is best soluble in oils like lanoline, as well as sweet oil, olive oil, or liquid *vaseline*. In salves and liquid oils, it acts properly and has done so in those cases in which I have used it.

With reference to what was said about *bromotone*, I did not mean to convey the idea that I prescribed it in fifteen grain doses as a rule; but I very often prescribe it in such doses, without any complaint on the part of the patient. Those cases in which I have used it have usually been cases of marked tinnitus aurium, in which bromides, such as strontium, were given, with bad results, producing acne. *Bromotone* does not produce acne. I do not hesitate to prescribe such a large dose in some instances.

As to aspirin, ten grains is the universal dose in general medicine.

In answer to the remarks made by Dr. Pierce in regard to *anesthesin*, I have been disappointed

in the use of this agent in that it did not act in every case. I have used it in some cases with satisfaction, and I can advise its trial. In the one case I mentioned, of intense itching of the external auditory canal, I used carbo-vaseline without any relief. In this case there was not only itching, but there was actual eczema present, and the anesthesin not only relieved but seemed to cure the condition, so far as we can obtain a cure of a chronic eczema.

With regard to pollantine, Dunbar has stated that the pollantine we use here is not the pollantine he would recommend for us to use. It was put on the market as an inferior preparation over which he has no control, and he hopes to have a preparation of pollantine which will act as a specific in the cases in this part of the country due to ragweed and golden rod.

I have never used injections of eucaine lactate, but I am glad to hear the experience of Dr. Pierce. If I remember rightly, he remarked about the drug in the same way at a previous meeting, when he used it locally, using it in 15 per cent. solution.

I have used alphozone as a nasal wash, but I will say that camphoroxol has given me perfect satisfaction. I like it much better than alphozone, because I do not like to use water in the ear for home treatment. The alcohol is much better.

In regard to Dr. Stein's remark about the use of pollantine before the beginning of the hay fever season, seven of my cases used it as long as two months before the season came on, and, as I said, with no better result than in starting it at the time of the attack. It did not seem to have any effect whatever.

Dr. Gordon Wilson read a paper entitled, "Sensory Nerve Endings at the Entrance to the Larynx, with Special Reference to the Structure and Function of the Taste Buds."

On motion, a vote of thanks was extended to Dr. Wilson for his admirable paper.

Dr. Fletcher Ingals read a paper entitled, "Bronchoscopy for the Removal of a Collar Button from the Lung." (See page 447.)

Discussion.

Dr. Joseph C. Beck: Ever since the reports of Killian, and particularly the reports of Dr. Ingals before this society, I have felt very sorry that I did not know more about bronchoscopy seven years ago, when we could have used such an instrument in a case that came under my brother's care and mine at that time. We had under our observation such a case and had to pursue operative procedures.

The patient was a boy, fourteen years of age, from Ohio, who inspired a collar button. A physician was called in a few moments afterwards, who found the boy in a cyanotic condition, and obtained a history that a button had been inspired. He attempted to remove the button with his finger, also by turning the boy upside down, but did not succeed. The boy was kept under observation for about a week, when he developed pneumonia, and the temperature ran as in the case described by Dr. Ingals. Two months after

he recovered from pneumonia, the boy was taken to Toledo; a skiagraph was taken, and button located. But shortly after that, say about three weeks, a severe burn of the chest was discovered. The boy was brought to Chicago with a large burn, and kept under observation for two months. There was a slow healing. This large burn assumed the appearance of a malignant growth, and was thought to be such by other surgeons, and by a microscopical examination said to be sarcoma. I wish to say that while physicians are treating sarcoma now by the X-rays, we know that one of the most expert X-ray men in this city (Mr. Fuchs) has developed an epithelioma of the finger and has had to have the finger amputated. I wish to mention that incidentally in connection with this boy's burn. After the burn had healed sufficiently, so that the boy could be operated on, he was put under an anesthetic and operated for an abscess of the lung; resection of the ribs was made, and an Estlander operation performed, with the evacuation of a large quantity of pus. The cavity was washed out, and a search was made for the button, but no button could be found in the region indicated on the skiagraph. The boy recovered from the operation, and gained very much in weight; but continued to cough. Two years later he returned to the city for the eventual cure of this condition, with possible resection of the lung. Such an attempt was made by Dr. Carl Beck, and a cut into the lung was followed by such a profuse and alarming hemorrhage that the operation was discontinued and the wound allowed to heal. The patient still has the button in his lung.

Dr. F. G. Stubbs: I would like to say a word or two suggested by the result of an operation I did this afternoon, and which is in line with the remarks made by Dr. Ballenger tonight. I think in many respects his instrument is an improvement on Killian's knife. The only thing is that in some cases he would be unable to use it in the manner he suggests, for while it may be used in a case which is easily proceeded with, as far as separating the muco-perichondrium from the cartilage is concerned, yet in many of these cases of extensive deviation we find over the edges with sharp corners the perichondrium is so adherent that it is impossible to proceed in separating it in its entirety on that side before we attempt to remove part of the cartilage. In that case it would be impossible to push the knife back along the floor, then up and forward on the upper part of the cartilage for the point of adherence of perichondrium would prevent the fork of the instrument from passing upward at this spot. In this case we have to remove part of the cartilage and then it is much easier to separate the muco-perichondrium at these adherent points.

The operation I did today gave me the specimen which I show you. I intended to remove a spur, and on examining the case carefully, I found there was slight deviation, the spur, of course, being on the side of the concavity. I have been using the Hajek spur chisel to the exclusion of the saw and other instruments, and I conceived the idea that with this chisel I

could remove where this spur was attached, so I made an incision in the muco-perichondrium, and separated that from the cartilage and bone as far as the extreme apex of the deviation. The apex extended out so far that it went into the middle meatus almost to the external wall of the nose, so it was impossible to continue the separation back of that. I introduced the chisel to the anterior edge of the spur and drove it back until I perforated the bone, and then with my speculum in the opposite side of the nose, I had my assistant gently tap the chisel, while I supervised the point of the chisel, which was now on the opposite or concave side, between bone and mucous membrane. I could see it lift the mucous membrane upwards as in separating on the opposite side for the ordinary window resection, until it got to the far side of the concavity when I pushed it straight through the bone, back on the spur and into the side of the concavity. In that way I removed not only the spur, but the entire thickness of the bone entering into that part, with intact mucous membrane on side of concavity.

The interesting part of the specimen is that the apex of this spur consisted of a prolongation of the cartilage from the cartilaginous part onto the bone, clear to the apex and around the back of it.

As you have read the article by Killian in the last Archive, you will remember that he spoke of this point; that in removing spurs low down, many times the spur on the bone near the floor is composed of cartilage overlying the bone, and after reading that article I was led to believe it was simply a displacement downward, but in finding this spur covered with prolongation of cartilage back over the bone, I am led to believe that in a great many cases the spurs overlying the part may be cartilage prolonged on to bone.

WEST SIDE BRANCH.

Officers.

President.....John A. Robison, 297 Ashland Boul.
Secretary.....J. J. Alderson, 264 S. Halsted st
Delegate to Council.....A. I. Bouffleur, 100 State st

In place of the regular monthly meeting of our Branch in January, the Branch held a banquet and reception at the Hull House, 335 So. Halstead street, where we gathered with our wives, daughters, sisters, etc., to the number of eighty persons, and had a most enjoyable time.

We were favored with an address by Miss Jane Addams of Hull House.

The following responded to toasts: Dr. John A. Robinson, our president; Dr. Emma C. Hackett, Dr. L. L. Skelton. One of the best features of the evening was an extempore talk by Dr. C. M. Fitch, a sturdy man of some 80 years old and still in daily practice; also by Dr. I. N. Danforth, our ex-president; then a rousing talk on organization by Dr. W. A. Evans.

Dr. Theo. Tieken proved himself capable as toastmaster, as he is teacher and worker.

Much credit is due to the efficient committee, Drs. W. M. Fitch, C. J. Rowan and C. C. Rogers.

We find these annual banquets a great aid in promoting a feeling of cordial friendship throughout our district.

At our February meeting Dr. C. C. Rogers read a paper, **Extra-Uterine Pregnancy, with Report of Cases**, being devoted to the etiology, symptoms, diagnosis and treatment of such cases. The doctor advised operation in every case that could be diagnosed as extra-uterine pregnancy, and gave a history of a number of operative cases and exhibited a specimen of ruptured tubal pregnancy he had removed a few days before.

Dr. J. J. Stoll read a paper on **Curettement** and reported a case bearing on the subject of the paper. The doctor condemned the present promiscuous use of the curette particularly the severe curettements we at times witness.

In the free discussion which followed, the bulk of opinion was in favor of Dr. Stoll's views and also against plugging the cervix with gauze after curettement, and the prevalent custom of cauterizing the uterine cavity after curettement.

Dr. J. A. Salisbury read a paper, **Clinical Value of the Examination of the Feces**, which was received with much favorable comment by all present, and different members expressed a desire to have an opportunity to study it in print.

The Clinical Value of Feces Examination.

Until the introduction of the stomach tube for diagnostic purposes and the systematic examination of the stomach contents after a definite test meal, the greatest uncertainty in regard to the meaning of symptoms referable to the stomach prevailed. A similar uncertainty still exists in regard to the abnormal processes occurring in the intestines. Naturally the examination of the feces presents itself as the analogue of the examination of the stomach contents and we might expect such an examination to throw great light upon the digestive processes. The attempt, however, to find in the feces a basis for a judgment as to the abnormal process occurring in the intestine has proved for the physician an unprofitable and unpleasant process. That it has been too much neglected goes without saying. This neglect is due partly to the unpleasantness for patient and physician involved in the nature of the material.

A suitable vessel in which to convey the material to the physician is a great desideratum. A glass ointment jar serves the purpose well for small quantities of feces and is to be preferred on the whole to a container holding large quantities. For the whole feces a good vessel is a glass fruit jar which can be closed air tight and needs only a suitable outer covering to make it an ideal container for this purpose. So far as the physician is concerned, examination of the feces is sometimes unpleasant, but this objection should have little weight if an important purpose is to be accomplished.

Another reason for neglect of feces examination lies in the fact that hitherto we have lacked a systematic method of examination which would throw a clear light upon the digestive processes. Previous examinations of the feces have been directed to the discovery of gall-

stones or the eggs of parasites, but have seldom been intelligently directed to the determination of the degree of perfection with which the functions of digestion have been performed.

The perfection with with normal digestive organs utilize the material submitted to them is so great that the feces normally consist of nothing but the indigestible residues of the food, bacteria, and remains of the digestive secretions, more particularly the coloring matter of the bile.

Imperfection of the digestive processes will be indicated by the presence in the feces of undigested material or material which has undergone digestion but has failed of absorption. The discovery in the feces of muscle fibres, connective tissues, elastic fibres, free starch, soluble albumin, or much fat, is evidence of imperfect digestion. But this discovery leads to two questions. 1st: Is this imperfection due to a diseased condition of any organ or is it due to the unusual task imposed upon the digestive organs by abnormalities in the quantity, quality, or preparation of the food? 2d: If disease of the digestive tract exists what organ is affected and in what way?

In answer to a first question we may state: The discovery of undigested food residues in the feces affords no certain indication of disease or abnormal function. Too large a quantity of meat or vegetable food or of fat is pretty sure to be followed by the appearance of undigested residues in the feces. Fermenting food or food of an irritating quality may so excite the intestinal peristalsis as to hurry the food through the digestive tract before digestion and absorption can occur. Raw potatoes, underdone meat, or imperfectly chewed food are apt to give undigested residues. Just as without a test meal the amount of acid in the stomach contents gives no reliable indication of the state of the gastric functions, so without a knowledge that the diet was normal we can draw no reliable conclusions from the appearance of undigested residues in the feces. To obviate this difficulty, A. Schmidt has devised his test diet. This diet has the following composition:

Morning—0.5 liter of milk (or when milk does not agree) 0.5 liter cocoa (made from 20 gm. powdered cocoa, 10 gm. sugar, 400 gm. water, and 100 gm. milk), and 50 gm. zwieback.

Forenoon—0.5 liter oatmeal gruel (prepared from 40 gm. oatmeal, 10 gm. butter, 200 gm. milk, 300 gm. water, and one egg). This gruel should be strained.

Noon—125 gm. hashed beef (raw weight) superficially roasted in 20 gm. butter so that internally it is still raw.

Also 250 gm. potato puree (prepared from 190 gm. mashed potatoes, 100 gm. milk, and 10 gm. butter).

Afternoon—The same as morning.

Evening—The same as forenoon.

The stool that results from this diet has a more homogeneous consistency and a lighter color than the previous stools. The second stool is usually due to the test diet. Normally this stool contains little fat and this is not free but in the form of soaps or of fatty acids. It contains no connective tissue, no muscle fibres,

no starch. This standard applies to the microscopic appearance of the stool. Occasionally connective tissue, muscle fibers, or starch may be found microscopically in small amounts. In such cases, the judgment as to abnormal functions must rest upon the amount of food residues present, and, to some extent, upon their character. Thus muscle fibers that are well preserved in long pieces with sharp corners and plainly marked striations indicate imperfection in the digestive process. Free starch (not enclosed cells) is pathologic. Neutral fat in droplets is abnormal.

The presence of considerable connective tissue recognizable by microscopic examination indicates imperfect activity of the stomach often dependent upon achylia or gastric atrophy. This determination may often be of the greatest importance where it is impracticable to remove the stomach contents. The discovery that intestinal disturbance depends upon imperfect action of the stomach is of the greatest importance for the therapeutics as well as diagnosis.

Evidence of the activity of the liver is afforded by the presence of urobilin in the stools. The brown color of feces is due to urobilin and when bile fails to enter the intestine the stools become clay colored. But it has been shown that the light color of such stools is occasioned quite as much by the amount of fat present, as by the absence of bile coloring matter. The microscopic examination of such stools will not justify the conclusion that the function of the liver is impaired. In Schmidt's test for bile coloring matter we have a means for determining this question. This test is made as follows:

A considerable portion of the stools (10 gm.) is rubbed in a mortar with a concentrated solution of mercuric chloride and allowed to stand from 6 to 24 hours. Urobilin will be colored red while bilirubin, if present, becomes converted into biliverdin and gives a green color to the mass. The presence of bilirubin may be ascertained by microscopic examination in cases where the macroscopic examination shows no evidence of its presence because the green color is obscured by the greater amount of urobilin present. Muscle fibers, vegetable residues and mucus which have been stained by the bile show a green tint under the microscope. The presence of either urobilin or bilirubin is evidence of the functional activity of the liver and patency of the bile passages. The occurrence of bilirubin in feces indicates either a greatly increased peristalsis or a diminution in the activity of the reducing action of the intestinal contents which converts bilirubin into urobilin.

This change occurs in the lower part of the small intestine, so that the occurrence of bilirubin in the stools is evidence of the disturbance of the functions of the small intestine.

Colorless stools may also be due to the conversion of urobilin into a colorless derivative called leukourubin and such stools have the appearance of clay colored stools. The color of the urobilin can be restored by treating the feces with acidified alcohol.

The light thrown upon functional disturbance of the pancreas by examination of the

feces is at present insufficient to permit very valuable conclusions to be drawn. The most that can be said is that with marked disturbance of fat absorption a failure more or less complete of fat-splitting and the presence of much neutral fat, many undigested muscle fibers, and free starch, a strong presumption in favor of disease of the pancreas is created. These conditions lose their significance if biliary obstruction or diarrhea are present. This matter has been thoroughly reviewed by H. Ury and M. Alexander. When this condition of the feces is associated with glycosuria, the presumption reaches a certainty. Many disturbances of the pancreas, both slight and severe may pass unnoticed with our present means of investigation.

There remains to be considered diseases of the intestine itself. The functions of the intestine may be classified under the heads of secretion, absorption, and motility. Disturbance of one of these is likely to be associated with disturbance of others so that it is difficult to say in any given case that the condition of the feces depends upon one factor to the exclusion of others. We possess a criterion for the motility in the time required for the various ingested articles to traverse the intestinal canal. This can be measured by giving a gram of carmine and nothing when the feces are tinged with pink by the carmine. This period depends, however, almost entirely upon the motor activity of the large intestine and we have no means of knowing how long food takes to pass through the small intestine. It is to be hoped that this hiatus in our knowledge will soon be filled by further studies.

Evidence of a disturbance of function in the small intestine is afforded by the presence of muscle fibers, plant residues, or mucus stained with bilirubin which becomes green by the action of mercuric chlorid in Schmidt's test for the biliary coloring matters. Bilirubin normally changed to urobilin in the small intestine and if this conversion fails we have reason to conclude that the functions of the small intestine are at fault.

Abnormal fermentations may furnish evidence of disease.

The occurrence of these fermentations is conditioned on the presence of fermentible material which consist of the carbohydrates principally starch in case of putrefactive changes. The alkaline fermentation is frequently due to the decomposition of mucus, pus, or blood. The acid fermentation usually precedes and excludes putrefactive changes.

Schmidt has devised a somewhat complicated apparatus to determine the presence of fermentible material but Strauss uses an ordinary fermentation tube consisting of a large test tube which is filled with liquid feces and closed with a bent tube. The test tube is inverted, placed in the incubator for 24 hours and the gas collects in the upper part of the tube.

Pus and mucus arising in the small intestine can not generally be recognized in the feces.

With blood the case is different. Blood which has its source in any part of the intestinal

canal may be recognized by a simple chemical test. The test is Weber's modification of the Guaiac test. It is so sensitive that the blood shed in cleaning the teeth may give a positive reaction. Before this test is made, red meat and other extraneous sources of blood coloring matter should be excluded from the diet for two or three days. It is evident that it is not applicable after the test diet.

The importance of this test can scarcely be overestimated. It is of great service in the diagnosis of ulceration of the stomach or intestines, or of carcinoma, or tuberculosis or syphilitic ulcers. It is also a guide in the treatment of ulcer, as the presence of blood in the stools shows that the diet is not bland enough. Its use in typhoid is to be recommended as a possible means of putting the practitioner on his guard against oncoming hemorrhage or perforation.

A further use of the test diet, in the author's opinion, will be found in determining that certain abnormalities are due to injudicious diet and not to a positive lesion of the intestinal tract. In case muscle fiber and free starch are found upon examination of the stools under the ordinary diet and disappear when the patient is placed upon the test diet, we may say that the trouble lies in the character of the diet and not in an actual diseased state of the digestive organs. By repeated examination of feces a diet can be arranged which will be suitable to the particular case.

The examination of feces presents the advantage that its material is easily accessible and can be repeatedly obtained without risk to the patient and the methods are so simple as to be within the reach of every practitioner.

A regular meeting of our branch was held at the Cook County Hospital, March 16, 1905, at 8:30 P. M., our president, Dr. John A. Robison in the chair.

Minutes previous meeting read and adopted. A short explanatory talk on the objects of our branch was given by Dr. Robison, after which Dr. Aug. Jacobson presented a specimen of double bladder, with a history of the case."

Dr. J. Scott Brown reported a case of supra-acromial dislocation of the clavicle with anatomical recovery without operation in a man 80 years old.

Dr. H. O. White read a paper "Feigned Pregnancy with report of case."

The paper elicited quite a discussion and many valuable ideas were brought out.

Owing to the lateness of the hour a paper, "Therapeutic uses of Drinking Water and some of its Dangers" by Dr. Eliza H. Root, was deferred to our meeting of April 19.

Feigned Pregnancy—Pseudocyesis.

Mrs. T., Russian by birth, 30 years of age, married about 7 years, nullipara, housewife by occupation, consulted me in January, 1900, as to the cause of her sterility. She complained of severe dysmenorrhoea with very scanty menstruation and leucorrhoea. Otherwise, perfectly well, except some indigestion, accompanied with

slight constipation and a marked degree of anemia. On examination I found the thoracic as well as the abdominal organs negative. Bimanual examination of the pelvic organs revealed the uterus and its appendages normal in size and position, freely movable, and absence of tenderness on external or internal palpation, but a very much contracted external and internal os with a corporeal leucorrhoea.

From the above examination I presumed that the partial stenosis and anemia were in all probability the cause of the dysmenorrhoea, leucorrhoea, and perhaps also of the sterility. I advised forcible dilatation of the cervix under general anaesthesia and curettage. To this she readily consented, as she was extremely anxious to undergo almost any procedure in order to be relieved from the dysmenorrhoea and leucorrhoea, and perchance, from sterility.

On February 11, 1900, I did the proposed work, and in addition introduced a specially-constructed hard-rubber stem pessary into the cervix, extending somewhat beyond the internal os, and left it there for about 8 weeks, in order to insure, if possible, permanent patulence. This procedure, together with the subsequent administration of Iron, Quinine, Strychnin and Arsenic in tonic doses, relieved her entirely from the dysmenorrhoea and leucorrhoea. She gained in strength and weight, and the anemia entirely disappeared. She remained fully hopeful to conceive in the nearest future.

After the elapse of a few months Mrs. T. again returned to me with the same question of sterility, and when after a careful examination all the pelvic organs were found in perfect condition, and after a physical examination of her husband, as well as a microscopic examination of the spermiatic fluid proved negative, I advised her to wait, and that everything might be well in the future.

She did not return to me any more, but as is usually the case with such patients, traveled around the city to find some one "willing to remove" the cause of her sterility. A year ago last January her husband told me that his wife consulted Dr. B. Van Hoosen of Chicago, who advised and operated on Mrs. T. in order to remove the cause of sterility. About three months after the operation Mrs. T., missing one menstrual period, consulted her physician as to the cause of it, and was told that she had become pregnant.

I was indeed exceedingly glad to hear it, knowing how extremely anxious that woman was to give birth. On December 17, 1904, Mrs. T., accompanied by her husband, came to my office to engage my services to her confinement. She claimed to be in the ninth month of pregnancy. She gave me a clear history of the early signs of pregnancy,—the nausea, vomiting, the amenorrhoea, enlargement of the breasts with secretion of colostrum, enlargement of the abdomen, and the sensation of fetal motion, and that she had made every preparation for the impending labor.

After a careful estimation of the symptoms and an equally careful local and combined examination, I had no difficulty to convince myself

of the true state of affairs. The instant I touched the cervix it was apparent that the uterus contained no fetus, at least no fetus near term, and although the abdomen was quite large, yet the outline of it was not like one usually seen at nearly full term in true pregnancy.

I have never seen a more pitiful and distressing condition of both husband and wife than theirs after I had assured them that Mrs. T. was not pregnant. At first she was full of grief with tears rolling over her face in rapid succession, and a few minutes later she again and again insisted that she was pregnant and that I must acknowledge it, as it was impossible for her as well as for her husband to be deceived by distinct fetal movements, and by the secretion of milk from her breasts. She even accused me of purposely misleading her, stating that I might be dissatisfied because she allowed another physician to "remove the cause" of her sterility. Later on she wished her death, and repeatedly threatened to destroy herself rather than suffer the possibility of not becoming a mother, and that this condition would kill her anyhow. In short, she absolutely refused to be comforted in any way, shape or manner. Their belief was grounded chiefly on the distinctness and force of the movements of the supposed fetus, but I became convinced after examination that it was strong peristaltic action of the intestines misleading her, and that pregnancy was counterfeited with wonderful similarity.

At last I proposed a consultation with any leading obstetrician whom she might choose, to which husband and wife readily consented. It was mutually agreed to meet the following day at a chosen physician's office at a certain time. But I found myself disappointed when I learned the next day that Mrs. T. returned to her former physician who "removed the cause" of her sterility, and who even at this time assured Mrs. T. of the existence of pregnancy, and that there was consequently no cause for her grief, and that everything would terminate happily in the very nearest future. In corroboration of the statement, the attending physician, placing the approximate date of delivery between the 5th and 10th of January, 1905, accordingly took the patient to some private home for the purpose to be confined. Mrs. T., remaining there until the 15th of the same month without the desired result, was compelled to return to her home in despair.

My object in reporting this case is not for the purpose of recording a case of phantom pregnancy, but to indelibly impress the importance of making a thorough bimanual examination, and repeating the procedure, if necessary, on every woman who supposes herself to be pregnant and comes to engage our services for the impending labor. My curiosity was aroused as to the importance authors on Obstetrics attach to the question of examining women supposed to be pregnant. In looking through many of the Obstetric text books, I failed to find anything mentioned on that subject in the older ones, such as Leishman, Cazeaux, Barnes, Playfair, etc.

Lusk: (Science and Art of Midwifery, p.

107) says: "Patients by their statements may in perfect good faith lead the physician into error."

Parvin in his book on Obstetrics, p. 179, says: "The practitioner who will avoid diagnostic error as to pregnancy must faithfully interrogate all the changes, both organic and functional, in the maternal organism, and those which are caused by fetal development."

A most excellent article on the importance, advantages and desirability of always resorting to a most thorough examination, and if need be, repeated prior to the time of delivery, is given in "The Cyclopedia of Obstetrics and Gynecology (Vol. I), a practical treatise on Obstetrics by Dr. A. Charpentier, 1887."

I have consulted many of my professional friends in Chicago concerning this question, and I was indeed surprised with the reply; that unless some special indication requires it, no examination is attempted. It is my custom to examine every woman who comes to me with a supposed pregnancy, and I have found very few women, almost none, who would not submit to the procedure if a proper explanation is made, or who will object to an examination for obstetric diagnosis. And unless my services are not engaged, I particularly request them to return at a later date, for I never pronounce a positive diagnosis until the fetal heart sounds can be distinctly elicited. I therefore deem it the obstetrician's duty to explain to the patient as well as to relatives, if any are present, the absolute necessity of more careful examinations, and to perform them with the utmost consideration, propriety and gentleness, for then and only then can the physician be prepared for the assumption of his professional obligations. I am convinced that every physician, in assuming the case of a woman supposed to be pregnant, should in the interest of his patient endeavor to ascertain not only the fact of the existence or non-existence of pregnancy, but also a positive knowledge, if possible, of all the data bearing upon the size of the pelvis, the condition of the soft parts of the mother, and the position of the child; and this information can only be obtained by careful, painstaking, and if necessary, repeated combined examinations. Cases of false pregnancy are not so rare as the general practitioner is inclined to suppose, and I can corroborate my statement by no less an authority than Dr. More Madden of Dublin, who states in "The American Journal of Medical Science of 1890, p. 27," that it occurs in nine cases out of ten of the kind in childless women extremely desirous of offspring."

Two varieties of Pseudocyesis are usually recognized: Local and Constitutional.

The former is usually met with in those cases of severe dysmenorrhoea, where occasionally, or even at every monthly period an excessive development of the uterine mucous membrane takes place, and which becomes greatly vascular and swollen, being eventually thrown off in the form of a cast, resembling in every respect the decidua formed in the early weeks of every true pregnancy. The expulsion of such membrane is naturally accompanied with great

pain, and one can occasionally observe such a case associated with some of the ordinary sympathetic phenomena of pregnancy, such as: Morning vomiting, enlargement of the breasts with darkened areolae, etc. But the principal source and origin of all these phenomena chiefly depend upon the local changes in such a uterus, and therefore the subject properly belongs to Membranous Dysmenorrhoea, which is quite familiar to all of us.

Constitutional Pseudocyesis is a subject of greater interest for investigation; for here we see a patient before us who unhesitatingly and insistingly declares herself to be pregnant, and whose statement you will not doubt, unless, together with the history, a very careful external and internal examination is performed. No class of patients are more unsatisfactory to meet with in practice than those now under consideration. The duty of a physician is very seldom more pleasant than when he is compelled to inform a woman, who for several months has faithfully believed herself to be pregnant, and has communicated this to her friends, and who has made all the necessary preparations for the welcome arrival of the new born, that she is not even pregnant. Again, if it happens that the attending physician neglects a thorough examination. I repeat, bimanual, or makes simply a superficial one, and easily coincides with the patient's opinion, he therefore makes himself a party in her self-deception; but as soon as the true state of the case comes to light, he will incur an almost incredible amount of odium from the patient, who makes him the scape-goat for all the bitterness for which a woman's pride is capable.

As to the diagnosis, false pregnancy in the early stages is always a matter attended with no little difficulty, for the symptoms may, and quite often do, exactly simulate those of true pregnancy in the same stage, but as the great diagnostician "Time" advances till after the fifth month, the positive signs cannot under any circumstances be counterfeited. Indeed it is very possible that in cases where women are anxious to be thought pregnant, to consciously contribute to the deception of the diagnostician by causing the abdominal muscles to become tense and rigid to such an extent that proper palpation of the uterine tumor is rendered impossible, but to this end a few whiffs of chloroform will clear up every doubt.

Very Strange.

Dr. Eury Strange who is attending the Marion Sims College, St. Louis recently visited Dr. Algy Strange his brother at Litchfield.

Dr. W. K. Wright of Taylorville, has left for California to reside. The illness of Mrs. Wright made this necessary.

Dr. and Mrs. Glidden of Danville, were entertained during the inauguration ceremonies at Washington by Speaker Cannon.

Dr. C. G. Wilson of Shenandoah, Iowa, has located in Chicago.

County and District Societies.

ADAMS COUNTY MEDICAL SOCIETY.

Regular meetings held in Quincy the second Monday of each month at 2 p. m. Membership 70.

Officers.

President.....Jno. A. Koch, Quincy
First Vice Pres.....J. M. Grimes, Camp Point
Second Vice Pres.....H. Hart, Quincy
Secretary.....Geo. E. Rosenthal, Quincy
Treasurer.....R. J. Christie, Quincy
Censors—Jos. Robbins, L. B. Ashton, E. B. Montgomery, Quincy.

Delegate to the State Society, L. H. A. Nickerson, Quincy.

Alternate to the State Society, R. J. Christie, Jr., Quincy.

The March meeting of the Adams County Medical Society was held at Quincy, March 13th, with President Nickerson in the chair.

Dr. W. W. Williams presented the following paper on "The Treatment of Mammary Tumor:"

The treatment of benign tumors of the breast is usually by simple incision of the tumor, which is generally followed by rapid recovery. But I wish to devote my time to the discussion of the treatment of that dread disease, carcinoma of the breast.

One should ever be mindful of the fact that internal metastases occur early, oftentimes before we suspect them, and, therefore, not a day should be lost unnecessarily in waiting for an operation. It is very important to attack carcinoma of the breast early, and I consider an operation is indicated even in cases that are clinically doubtful.

Surgeons are aware that the prognosis depends upon the extent of the growth, and should expose all tumors for the purpose of diagnosis when carcinoma cannot be absolutely excluded. The surgeon should no more hesitate to make an exploratory incision to determine the nature of a tumor of the breast than in the case of obscure abdominal tumors. It is not right to keep a woman with a tumor of the breast that cannot be shown to be benign, under observation for months, make use of ointments, and finally be obliged to confess that the condition is carcinomatous. The most favorable time for operation has passed and the chances of recovery greatly diminished, as specimen No. 1 on exhibit proved. Mrs. O., age 45 years, first consulted me March 18, 1900, at the request of the late Dr. Virgil McDavitt, who had charge of the case. The tumor of the breast had been discovered eight months before. I diagnosed carcinoma and advised an immediate excision of the breast and axillary glands, which she refused. I did not treat the case until April 23d, following. I did a Halsted's operation, covered in wound with skin flaps, which healed nicely, but she died of metastasis twenty months later. Operation upon the breast for cancer and cleaning out of the axilla is not especially dangerous to life. The death rate is less than 1 per cent. Sepsis, heart-

failure, emboli and hypostatic pneumonia are the chief causes of a fatal termination. I believe that cancer of the breast in its early stages is a local disease, and that a permanent cure is possible by radical removal of the tumor. The condition never gets well of itself, and the result of other methods of treatment is extremely doubtful. A cure can only follow a radical operation. I would not advise an operation in which there is extensive involvement of the skin or of the ribs, and where there are immovable masses of glands in the axilla associated with neuralgia and disturbance of circulation. It is evident that no operation is possible when internal metastases exist or when the woman is cachectic and exhausted. Enlargement of the clavicular and cervical glands should not deter surgeons from operating, as they can be removed by extensive dissection, but when there are extensive glandular involvement they should not be operated on as the results are unfavorable.

It is absolutely necessary to remove the entire breast and at least the superficial fibers of the pectoral muscle in any cancer of the breast, no matter how small the tumor, and the axilla dissected even when no glands can be felt. Believing that women are prone to overlook and then conceal mammary tumors, and further, that general practitioners, who will be the first consulted, are not usually prompt in referring such cases as their gravity requires, axillary involvement will almost inevitably have taken place when the surgeon is first consulted. Prof. W. L. Rodman, of Philadelphia, says: Upon this point I wish to speak positively, as I have never operated for scirrhus cancer where there was not both microscopical and macroscopical involvement of the axillary glands.

Practically all of the fifty American surgeons expressing themselves upon this point agree that the axillary glands are invariably found infected at operation. Therefore, in planning an incision, one should think as much of the axilla as the breast, both for practical purposes, being looked upon as certainly infected. The next thought should be of tissues probably infected, and under this heading will fall the intervening lymph channels between breast and axilla. The fascia covering the pectoralis major in most instances, and the sternal portion of the muscle itself (or glands within the substance) in a very much greater number of cases than hitherto suspected. It is certainly desirable to remove all infected tissue en mass, thereby avoiding the liberation of cancer cells if it can be done without increasing the mortality, lengthening the convalescence or materially impairing the patients subsequent usefulness. The operative mortality is so low that it may practically be disregarded, being very much less than minor operations on the breast were ten years ago. The convalescence is not much if at all, lengthened by the major operation; and large experience has demonstrated that removal of the mus-

cles does not permanently impair the function of the arm to a serious degree, save in a few rare instances, and then due chiefly to loss of skin rather than muscle. Serious contraction of scar can, in a great measure, be prevented by Thierch's grafts when needed. Be sure and remove plenty of skin as you must remember that recurrence is very generally in the skin.

As to the axillary glands, it may be said positively that they cannot be removed entire unless the pectoral muscles are first cut away.

Volkman was probably the first to remove the pectoral muscles, but to Halsted belongs the credit of first practicing removal of apparently healthy pectoral muscles as a routine matter. It is better, however, to reverse Halsted's method *i. e.* begin at the insertion and work toward instead of away from the sternum, for these reasons: (1). The axilla is uncovered at once; (2) hemorrhage is more easily controlled; (3) the axilla is cleared from above downward, and not from below upward; (4) the large, heavy mass containing the breast is not in the way, while the tedious axillary dissection is going on; (5) one can more readily and more certainly remove all infected tissue in one piece; (6) it makes unnecessary—and this is of the greatest importance—handling of the breast by surgeon and assistants, which may result in expressing cancer-cells upon healthy tissues.

Drainage. It is my belief that drainage should always be made after an axillary dissection, for unless it be done much time must be given to arrest every particle of hemorrhage, otherwise a large clot will form in the dead space left behind and invite suppuration. Of twenty-five surgeons expressing themselves upon this point, all but three (Bloodgood, Halsted and Richardson) invariably drain. The necessity for drainage seems especially urgent when the axillary vein is injured; formerly all such cases died; now they do not.

Supraclavicular Glands: Halsted and his associates at the Johns Hopkins remove the supraclavicular glands in most cases, and this should be done if there is noticeable enlargement of these glands or if the subclavian chain of the axillary ones are at all enlarged they should be removed.

Three-Year Limit: Most American surgeons do not regard the three-year limit as at all certain and the general tendency is to extend the period to five years.

Professor W. L. Rodman, of Philadelphia, says in his investigation as to ultimate cure, six surgeons (Abbe, Crile, Halsted, Powers, Warren and Rodman) reported 629 cases operated—favorable and unfavorable cases, of which 44.16 per cent of cures, or patients who had passed the three-year limit without evidence of either local or general recurrence. Several of the cured were recurring ones, (Warren, Halsted, Ochsner, Powers, Taylor, Park, Abbe, Willard, DaCosta and Richardson). Also Rodman reports one case of his own, operated upon for a second recurrence of a schirrhous carcinoma, was perfectly well more than six years after the third operation. I have one case that was operated on in Minneapolis, Minn., followed by a return of the growth.

I did a second operation and removed everything down to the ribs, cleared out the axilla, made skin flaps and closed the wound, which healed, and there has been no recurrence in eight years. This is the specimen I removed, No. 2. I operated on a case of cancer of the breast of a lady who came from near Portland, Oregon, in 1885, removing the breast. I heard from her two years ago saying she was in good health. Her case had been pronounced incurable by the physicians before she came to me for operation.

Conclusions.

1st. An early diagnosis should be made and no time lost in waiting for an operation, as metastases to the axillary glands and internal organs occur early, often before they are suspected. In 9 per cent of all cases it is impossible to make a clinical diagnosis.

2nd. When in doubt as to malignancy, a complete operation should be arranged for; but before removing the breast an exploratory incision should be made into the growth, and a piece from near its center submitted to a competent pathologist, who, as a rule, will give an accurate report in ten minutes. If malignant, a complete operation should be done immediately. In women past forty the chances in favor of malignancy are as 13 to 1, and should, therefore, be assumed.

3rd. Carcinomata of the sternal hemisphere are less common than similar growths in the axillary half of the gland, but are probably more frequent than they are thought to be. The prognosis is worse in them than in cancers of the axillary hemisphere.

4th. Recurrence being usually in the skin, its removal cannot be too free. Skin grafting, or closure of the wound by plastic flaps, the preferable method, will frequently if not usually, be necessary.

5th. The pectoral muscles, major and minor, should always be removed, regardless of infection, so that all diseased tissues can be removed in one piece, and the axillary dissection both more thoroughly and safely made. Their loss neither increases the mortality, lengthens the convalescence, nor seriously impairs subsequent usefulness of the arm.

6th. The supraclavicular glands should be removed if palpably enlarged, or if the topmost axillary glands show microscopical involvement, otherwise their removal is unnecessary.

7th. The wounds of the axillary vessels have been infrequent since the muscles have been removed as a routine practice. When occurring in an aseptic operation they have always been recovered from. Moreover, the edema following is inconstant and transitory, and never a troublesome symptom.

8th. Drainage should always be made.

9th. The three-year limit of Volkman is insufficient, and should be extended to at least five years. Recurrence may occur after ten or more years.

10th. The operative mortality in 2,133 operations performed since 1893, by twenty-one American surgeons, was less than 1 per cent. This seems almost incredible when contrasted with

the 15 to 25 per cent mortality for incomplete operations on the breast in pre-antiseptic days.

Opening the discussion, Dr. Robbins said that in the condition of chronic abscesses the nipple may be retracted and this would suggest carcinoma. An equally suggestive feature was the wasting and apparently carcinomatous cachexia, which are both marked in chronic abscesses of the part.

The differential diagnosis in these cases when of some considerable standing, is a matter involving anxiety on the part of the medical man.

The neuralgic breast with radiating lancinating pains through the mammary gland and down the arm, the eventual nodulation and gradual enlargement of the nodules together with the possible condition of retracted nipple, also presents a state of difficult differentiation.

Dr. Robbins reported a case in point as follows: The patient, a female of middle age, had suffered for some time with pains of much severity in the affected breast. Retraction of the nipple was present and was suggestive of carcinoma.

The part had been examined by surgeons and pronounced malignant; recovery was made, however, under local medication and strapping.

Another case presenting a fistula of the breast from hardening of the milk duct was pronounced cancerous by an able surgeon. This also made a good recovery after irrigation and mechanical support, patient living for some 12 years thereafter.

Dr. Montgomery thought the diagnosis of carcinoma not difficult in most cases. Chronic mastitis gives the patient much uneasiness; in these cases he found the iodides to be efficient. It was his opinion that the Halsted operation was the most satisfactory.

Dr. Nickerson had noticed frequent recurrence and death after operative procedure for cancer. With regard to Halsted's operations in three cases where this was performed with removal of the breast and axillary glands, the pain after operation was much greater from contracting scar tissue than that pre-operative. Lack of free arm movement was another disadvantage that appeared post operative.

Adjournment.

The annual meeting of the Adams County Medical Society was held in Quincy April 10, 1905, President Nickerson being in the chair.

Those present were: Drs. Ashton, Baker, Burch, Carter, Christie, Ericson, Fletcher, Gilbert, Grimes, Hart, Knok, Koch, Montgomery, Nickerson, Nichols, H. P., Pfeiffer, Rosenthal, Reticker, Robbins, Rice, Williams, J. J., Williams, W. W., and Wells.

Dr. Carl Black, of Jacksonville, counselor for the Sixth District, addressed the Society in his official capacity. He spoke upon medical organization and advanced some excellent ideas for the promotion of interest at the meetings of medical societies. Among other things he suggested joint meetings, for the mutual benefit of those meetings, with:

1. Attorneys.
2. Ministers.

3. Teachers.

4. Barbers.

5. Life Insurance Agents.

He touched upon the value and small individual cost of protection against malpractice suits by organization, the average annual individual cost being about \$1.00.

The matters were discussed by the Society and a rising vote of thanks was extended to Dr. Black.

BRAINERD DISTRICT MEDICAL SOCIETY.

Regular meetings held quarterly. Membership 80.

Officers.

President.....P. H. Oyler, Mt. Pulaski
Vice President.....C. A. Stone, Mason City
Secretary.....H. S. Oyler, Lincoln
Treasurer.....C. C. Reed, Lincoln

The twenty-ninth annual meeting was held at Lincoln, April 27th, with a good attendance.

In the morning a memorial service for Dr. P. L. Dieffenbacher, of Havana, was conducted by L. L. Leeds of this city.

The following officers were elected: President, P. H. Oyler, Mt. Pulaski; first vice-president, C. A. Stone, Mason City; second vice-president, W. E. Guthrie, Bloomington; third vice-president, C. C. Montgomery, Lincoln; secretary, H. S. Oyler, Lincoln; treasurer, C. C. Reed, Lincoln.

The new members received were Messrs. Bradburn and Cosby, Lincoln; James of Elkhart; McClelland of Beason; Doudall and Wilcox of Clinton.

CASS COUNTY MEDICAL SOCIETY.

Regular meetings are held at Virginia the second Wednesday of each month. Membership 18.

Officers.

President.....J. G. Franken, Chandlerville
Vice-President.....J. M. Hubbard, Virginia
Secretary-Treasurer.....J. A. McGee, Virginia
Delegates to State Society—A. R. Lyle, Virginia;
Geo. Bley, Beardstown; J. A. Glenn, Ashland

The Cass County Medical Society met in Virginia, Wednesday afternoon, April 12. A good representation of physicians of the County being present, also Dr. C. E. Black, District Councilor and Dr. J. A. Day, of Jacksonville. The regular order of business was passed over, after which Dr. Black gave a very interesting talk, outlining methods by which County Societies may maintain membership, also secure good attendance at meetings, advising meeting between the County Society and various municipal boards for discussion of questions pertaining to general sanitation, also school boards and teachers for the purpose of discussion of school sanitation and adolescence in school children. Excellent points were made which will perhaps be acted upon by the Society in the future. Dr. Day also commented on the subjects touched by Dr. Black. Dr. L. M. Sinker, present—

ed an interesting clinical case of Hysteria in a young girl, which developed after a dog bite, the Hysterical paroxysms simulating convulsions in Hydrophobia, which was discussed by Dr. Glenn and others present. This meeting being the annual meeting, officers were elected as above.

Our society while not growing in numbers especially, is however, growing in influence. In the County much good to the physician has already been accomplished and we hope to accomplish even more. Our next meeting will be held in Virginia the second Wednesday in May, at which time Dr. A. R. Lyle will present a paper on Anesthesia in Labor, which will prove of interest to all.

CLARK COUNTY MEDICAL SOCIETY.

Regular meetings are held at Marshall, quarterly.
Membership 12.

Officers.

President Dr. Rowland
Vice-President Dr. Ryerson
Secretary-Treasurer L. J. Weir
Delegate Dr. Hall
Censors Drs. Hall, Prewett, H. W. Haslit
Committee on Program and Scientific work—
Drs. Duncan, Bradley and L. J. Weir.

The Clark County Medical Society met at the Court House, Marshall, April 13, 1905, at 2:00 p. m., called to order by President Hall. Members present: Hall, Rowland, Bradley, Pearce, H. W. Haslit, L. J. Weir, John Weir and Ryerson.

Dr. Rowland reported a case of **Imperforate Hymen in a woman married twenty years**. Dr Hall reported a case of a woman who suffered painful coitus caused by irritation of bladder, accompanied by blood in the urine frequently. Trouble has continued for years.

Dr. Rowland presented an interesting paper on obstetrics, dwelling especially upon management of the ordinary case of confinement, many practical points being made. He described his plan in detail, of waiting on a case. A lengthy and valuable discussion of the whole subject of obstetrics followed, participated in by all present, each man telling in detail just how he manages the ordinary case and also the complications. Eclampsia, Placenta Previa, Post Partum Hemorrhage, etc. The use of chloroform was cussed and discussed and the fact probably remains that some use it too much and others not enough. If only used for an hour during pains only, and never to complete anaesthesia (except possibly in some cases when the last two or three pains are quite severe and perineum rigid) it is permissible in quite a number of cases. Forceps is applied often times without chloroform. Several members very seldom use an anaesthetic. Morphine $\frac{1}{4}$ to $\frac{1}{2}$ gr. is used at the beginning of tedious labors frequently lessening suffering and give a few hours rest.

Officers for the ensuing year were elected as above.

Upon motion of Dr. Ryerson, Martinsville was selected to be our next place of meeting, it

was considered better to meet in other cities than the county seat, at times.

Nephritis was chosen as the subject for next meeting.

Society adjourned.

DEWITT COUNTY MEDICAL SOCIETY.

Regular meetings are held in Clinton on the second Tuesday of January, April, July and October. Membership 25.

Officers.

President J. M. Wilcox, Clinton
Vice-President G. M. Robertson, Wapella
Secretary and Treasurer, A. E. Campbell, Clinton
Delegate to State Society J. H. Tyler
Alternate Geo. S. Edmonson
Censors—W. E. Chalstran, Lane, 1 year; W. E. McClellan, Beason, 2 years; G. G. Dowdall, Clinton, 3 years.

The annual meeting of the DeWitt County Medical Society was held on Tuesday, April 11, in the county court room. The attendance was large. A new constitution was adopted which would harmonize with our state and national constitutions. It was agreed to include the fee bill and a brief historical sketch of the early practitioners of this county and the same published in pamphlet or book form.

Dr. Campbell reported that he had been called to assist Dr. Craig in a case in Logan county. He was told that the man was poor and unable to pay; a few days later he received word from the supervisor of that township that if he would render a bill for his services he would see it was paid. The doctor obeyed the order and in due time received a certified check for the amount. Dr. McClellan said he had practiced in Logan county over twenty years and never had a bill ignored or turned down; they were always paid in full without a word. Dr. Edmonson said in Macon county the bills presented for pauper patients were always paid in full without a word. This was contrasted with the actions of the supervisors of this county who either ignored doctor bills, fought them in the courts or turned them down entirely, and was designated as unfair and unjust.

Dr. Robertson reported an interesting case of albuminuria in pregnancy.

Dr. Wilcox read a paper which was well received.

It was agreed to change the hour of meeting from 1:00 p. m. to 10:00 a. m.

Society adjourned to meet the second Tuesday in July.

MORGAN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Jacksonville the second Thursday of each month.
Membership 12

Officers.

President J. W. Hairgrove, Jacksonville
Vice President Josephine Milligan, Jacksonville
Secretary-Treasurer D. W. Reid, Jacksonville

The regular meeting held April 13th, at 8:00 p. m., in the assembly room of the public library, was addressed by Dr. J. W. Pettit, superintendent

ent of the tent colony for tubercular patients at Ottawa, Ill. who was heard by an audience which was limited only by the capacity of the room.

Dr. Pettit's address discussed the terrible ravages which consumption is making in this country and the whole world, and of the proper means to be taken for checking its spread. The movement which he represents was explained in full, and it was urged that people in general and especially physicians should use their influence toward widening the scope of the work and making it more effectual. At the conclusion of the lecture about an hour was spent in discussing questions relating to the subject, many of the laity as well as of the profession participating, and all the different phases of the subject were in this manner covered.

PULASKI COUNTY MEDICAL SOCIETY.

Regular meetings are held in Mound City the first Tuesday in January, April, July and October. Membership 16.

Officers.

President.....C. J. Boswell
Vice President.....Monroe Doty
Secretary and Treasurer.....A. W. Tarr

The Society met on Tuesday, April 4th, and elected the above officers. Several interesting papers were read and discussed. Dr. J. F. Hargan was appointed a delegate to the State Society.

DISTRICT MEDICAL SOCIETY OF CENTRAL ILLINOIS.

President.....Amos Sawyer, Hillsboro
1st Vice President....F. J. Eberspacher, Pana
2nd Vice President....Frank Dauld, Shelbyville
Secretary.....R. C. Danford, Pana
Treasurer.....J. N. Nelms, Taylorville

The thirty-first annual meeting of the District Medical Society of Central Illinois convened in Pana April 25th, and was largely attended by physicians from over the central part of the state. The reports of the various officers showed the society to be in better condition both in membership as well as financially, than ever before in the history of the society. The meeting went in session at 11:00 o'clock, when Dr. Mammen, of Bloomington, held an Orthopaedic Clinic at the city hospital. The examination of several patients were made after which the following programme was rendered: "Can the Mind be Diseased," Amos Sawyer, M. D., Hillsboro; "Fractures," Dr. Will Wood, Decatur; "Appendicitis," J. M. Little, Rosemond; "Extra Uterine Pregnancy," Dr. G. N. Kreider, Springfield; "Foreign Bodies in Air Passages," Dr. W. H. Sparling, Moweaqua; H. B. Milhon, Millersville.

Officers were elected as above.

The next meeting will be held in Pana the last Tuesday in October.

DECATUR MEDICAL SOCIETY.

Regular meetings are held in the Decatur Club Rooms the fourth Tuesday of each month Membership 62.

Officers.

President.....E. J. Brown, Decatur
Vice President.....Ellen F. T. Grimes, Decatur
Secretary-Treas.....Benj. Bachrach, Decatur
Board of Censors: E. A. Morgan, F. M. Anderson, J. Stebbins King.
Program Committee: W. C. Bowers, Chairman; E. J. Brown, W. C. Wood, A. Wilhelmy, L. M. Barnes.
Delegate to the State Society: Cass Chenoweth, W. C. Bowers, E. J. Brown.

The fourth annual banquet of the Decatur Medical Society was given April 25th at the St. Nicholas hotel. An elaborate dinner was served to the fifty members and guests who were present. Dr. L. Barnes, retiring president of the society, acted as toastmaster.

Dr. Hugh T. Patrick, of Chicago, was the guest of honor, and gave an address on the diagnosis of hysteria.

A number of guests from Springfield were present including Drs. E. E. Hagler, L. C. Taylor, S. E. Munson, R. D. Berry and B. B. Griffiths.

GALLATIN COUNTY MEDICAL SOCIETY.

Regular meetings are held the second Wednesday of each month. Membership, 16.

Officers.

PresidentJ. N. Bourland, Equality
Vice PresidentI. N. Foster, New Haven
Sec. and Treas...W. H. Grattan, Shawneetown

The Gallatin County Medical Society met in regular session at Dr. Bowling's office in Shawneetown, April 12, 1905. In the absence of President Bourland, Dr. Foster presided. The secretary read the minutes of last meeting which were approved. Members present, Drs. T. A. Jones, Paul Sherman, A. B. Capel and J. W. Bowling.

A paper, title, "Summer Diarrhoea in Children," was read by Bowling and discussed by all present.

The above officers were elected by acclamation for the ensuing year. On motion, the president was instructed to appoint a delegate to the Illinois State Society meeting May 16-18, 1905.

Drs. Grattan, Sherman and Capel were selected to prepare a program for the next meeting which will be held at New Haven May 10th, at 1:00 o'clock p. m. We hope to have a good attendance at this meeting.

JO DAVIESS COUNTY MEDICAL SOCIETY.

Officers.

President.....A. C. Czibulka, Warren
Vice President.....T. J. Stafford, Stockton
Secretary and Treasurer...D. G. Smith, Elizabeth
Censors: H. F. Gunn, H. B. Gratiot, C. E. Wright.
Delegate, U. S. Lewis; alternate, H. T. Godfrey.
Membership, 30.

The Jo Daviess County Medical Society held its fifth anniversary meeting at the Grand Army hall, Warren, Ill., April 20, 1905, the president

in the chair and the following members present: Nadig, Keller, Tyrrell, Lewis, Kreider, Smith I. C., Czibulka, Smith D. G., Phillips, Buckman, Gratiot, Grassan, Wright, Gunn, with Dr. Kea of Stockton as a visitor.

Minutes of previous meeting read and approved.

The first essayist being absent, a motion was made to go ahead with the business part of the program.

The president appointed a committee composed of Lewis, Kreider, Smith I. C., to divide the county members into four districts for entertainment, also an auditing committee composed of Nadig, Tyrrell and Keller.

Dr. Czibulka moved that \$5.00 be added to the secretary's salary for the past year. Motion carried.

The secretary moved that the chair appoint a nominating committee to nominate two candidates for each office. Motion lost.

The committee on dividing the county then made the following report:

Galena Division—Godfrey, Gunn, Beuch, Weirick, Smith W. A., Jacobs.

Warren Division—Czibulka, Keller, Grassan, Phillips, Buckman.

Elizabeth Division—Smith D. G., Nadig, Miller, Egan, Wright.

Stockton Division—Smith I. C., Stafford, Lewis, Kreider, Tyrrell.

The auditing committee presented the following report:

Cash on hand at beginning of year.....	\$ 28 32
Received for dues.....	125 00

Total	\$153 32
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Expenditures for year just ending including State Society dues, printing and secretary's salary	\$ 84 96
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Balance on hand.....	\$ 68 42
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Dr. Grassan then read a paper on "Diabetes Mellitus." The discussion was opened by Dr. Czibulka, who suggested paraffine. Dr. Phillips, Kreider, Keller, followed with some remarks.

Adjourned for dinner.

The president delivered his annual address.

Election of officers was next taken up and resulted as above.

Paper read by D. G. Smith on "Neuritis." Discussed by Kreider and Phillips.

Dr. Lewis then moved and was seconded by Kreider, "That inasmuch as there was money in the treasury the dues should now be reduced to \$3.00 per annum." This motion was declared to be unconstitutional, and Dr. Tyrrell then moved that the secretary donate \$2.00 to each member as he pays his year's dues. After some discussion the motion was voted on and was carried.

Galena was selected as the next place of meeting.

SANGAMON COUNTY MEDICAL SOCIETY.

Regular meetings are held at the Lincoln Memorial Library in Springfield the second Monday of each month at 8 p. m. Membership 75.

Officers.

President W. O. Langdon, Springfield
Vice President R. D. Berry, Springfield
Secretary-Treasurer C. R. Spicer, Springfield
Directors, S. R. Hopkins, E. E. Hagler, A. O. Taylor

The Sangamon County Medical Society held its regular monthly meeting in the Lincoln Library April 10, 1905.

The president and vice president being absent the meeting was presided over by Dr. Munson. There were sixteen in attendance including Drs. S. W. Shurtz of Champaign, C. R. Bell and J. H. Utley of Thayer.

Minutes of the February meeting were read and approved. Dr. Bell's name was proposed for membership. Drs. A. R. Trapp and W. A. Halbert were elected to membership. Bills covering the current expenses of the society for March and April amounting to \$10.75 were read and ordered paid.

Dr. Kreider offered the following resolution: Resolved, that it be the sense of the Sangamon County Medical Society that our representatives in the 44th General Assembly be requested to oppose the passage of Senate Bill No. 311 and House Bills No. 228 and 229. Dr. Hopkins offered to amend the resolution by having a committee appointed to explain to the said representatives why the above bills should be opposed. The motion as amended carried and the chair appointed Drs. Kreider, Hopkins and A. D. Taylor on the committee.

The literary exercises of the evening consisted of papers on the following subjects: "The Faucial Tonsil," by Dr. A. E. Prince and "Paroxysmal Tachycardia," by Dr. A. L. Brittin.

Dr. Prince emphasized the importance of thoroughness in removing adenoid, saying that the unsatisfactory results so often following the operation were due to obstruction remaining after the operation. This obstruction often consists in a thickened turbinated bone, a deflected septum or even a portion of the adenoid mass. An anesthetic should always be used. The author has devised an instrument which he introduces through the nares and bites off or tears out such obstructing bodies. He said that the symptom of respiratory obstruction was more often caused by adenoids than tonsils.

He prefers total extirpation of the tonsil to tonsilotomy since the stump of the severed gland does not always shrink and may become a port of entry to infection. This operation he performs by grasping the tonsil with an Ingal's forceps and clipping away the base with a scissors. The paper was practical and interesting and was generally discussed.

Dr. Britin reported an interesting case of true paroxysmal tachycardia occurring in a woman somewhat past middle age. Often, while in good health, she would be seized with a paroxysm during which the pulse would reach 180 per minute. The duration of the attacks varied from a few minutes to several hours. During the seizure the patient felt a sense of fullness and tension in the head which was re-

lieved at once when the attack had passed. Her heart shows no organic lesion. The case is an historic one, having engaged the efforts of several able physicians, but so far all therapeutic efforts have failed. Several similar cases were reported during the discussion, but all were agreed that as yet no efficient treatment is known for this enigmatical condition.

The meeting closed in form to meet in one month.

ST. CLAIR COUNTY MEDICAL SOCIETY.

Regular meetings are held at Priester's Park, Belleville, the first Thursday of January, April, July and October. Membership \$1.

Officers.

President C. H. Starkel
Vice President W. E. Wiatt
Treasurer A. E. Hansing
Corresponding Secretary C. W. Lillie
Recording Secretary B. H. Portuondo

The St. Clair County Medical Society met in regular session at Priester's Park on January 5, 1905, with President Starkel in the chair.

In the absence of the recording secretary Dr. W. S. Wiatt was appointed secretary pro tem.

The amendment to the constitution which was submitted at the last meeting proposing a change of times of meeting from monthly to quarterly, was read, and on motion was adopted.

The report of the treasurer was read, and on motion was accepted.

A vote of thanks was tendered Dr. Hansing for his services.

Dr. Hansing reported a case of spinabifida.

Dr. Fairbrother reported a case of typhoid fever.

Dr. Zimmermann reported a case of typhoid fever followed by periostitis of the tibia. Also a case of remittent fever.

Dr. W. E. Wiatt reported a case of typhoid fever. These cases were all thoroughly discussed by the members present.

On motion a committee on scientific program was appointed as follows: Drs. Lillie, Fairbrother and J. W. Twitchell.

Society adjourned.

The St. Clair County Medical Society met in annual meeting at Priester's Park, on Thursday, April 6, 1905, with Dr. W. E. Wiatt, vice-president, in the chair; Dr. Portuondo, recording secretary; Dr. Lillie, corresponding secretary; Dr. Hansing, treasurer.

The report of the treasurer was presented and accepted.

On motion a committee of three, consisting of Drs. Gunn, Campbell, and Raab, was appointed to nominate officers for the ensuing year.

The committee reported the following names: For president, W. E. Wiatt; for vice-president, H. E. Wangelin; for corresponding secretary, Geo. E. Hilgard; for treasurer, J. W. Rendleman; for recording secretary, W. C. Spannagel.

On motion the report of the committee was accepted and the committee discharged, and the secretary instructed to cast the vote of the Society on those named by the committee. This was done and they were declared elected.

A vote of thanks was tendered the retiring officers for the very efficient service they had rendered the Society.

Dr. W. S. Wiatt read a paper on "head injuries."

The Board of Censors reported favorably on the application of Dr. U. S. Short, of East St. Louis, and he was accordingly elected to membership.

Dr. J. W. Twitchell reported a case of recovery from a gunshot wound of the abdomen with perforation of the intestines, without operation. The report is as follows: On April 10, 1902, my brother and myself were called to attend Mr. L., and found him suffering from two gunshot wounds of the abdomen. Upon examination we found that the gun from which the shots were fired was of twenty-two calibre. The physical examination showed that one bullet had entered the body about three inches below, and two inches to the right of the ensiform cartilage. Probing was not employed beyond ascertaining the direction taken by the bullet after it entered the body. This bullet followed the belly muscles around the left side of the abdomen and lodged in the lumbar muscles of the back where it could be easily located by the tumor which it produced, and also by the X-rays by placing the fluoroscope to the back. The other ball entered the body about four inches below, and about five and one-half inches to the right of the tip of the ensiform cartilage, and ranged downward and to the right, but could not be located. Patient complained of slight pain in the region of the cecum. Shock was not severe, so we decided to put the patient to bed and wait developments; withholding all food, water only being given in small quantities, and at regular intervals. All bowel movements were watched, and as no unfavorable symptoms developed this treatment was continued. On the eighth day the bullet was found with the stools, having passed per rectum. The same treatment was continued for eight days longer, when food was allowed. On the twentieth day after the accident recovery was complete and the patient was discharged. Three years have now elapsed since the accident and no unfavorable abdominal symptoms have developed.

Dr. Campbell, in commenting on this case said it was one of the happiest outcomes of which he had ever heard.

Dr. Little said it was a very rare occurrence and that it was interesting to have such put on record.

Dr. Fairbrother said it was a most remarkable case and worthy of record.

Announcement was made that refreshments were ready, and on motion the society adjourned.

VERMILION COUNTY MEDICAL SOCIETY.

Regular meetings are held the second Monday of each month in the city hall, Danville, at 8:30 p. m. Membership 71.

Officers.

President.....F. N. Cloyd
Vice President.....S. L. Landauer
Secretary-Treasurer.....C. E. Wilkinson
Board of Censors—H. F. Becker, Joseph Fairhall and Benj. Gleeson.

Delegates—T. E. Walton and R. A. Cloyd.

The Vermilion County Medical Society was called to order in the council chamber April 11th

at 8:30 p. m., and in the absence of the president A. J. Leitzbach presided.

The minutes of the last meeting were read and adopted.

Members present—A. J. Leitzbach, Leroy Jones, J. M. Wilkins, Joseph Fairhall, H. F. Becker, Robt. McCaughey, A. M. Miller, C. P. Hoffman, E. M. Smith and C. E. Wilkinson.

The report of the committee on printing constitution was adopted and the committee discharged. The secretary is now supplied with constitutions and by-laws for distribution to the members. The bill for printing constitution and by-laws was presented and ordered to be paid by the secretary.

The first paper of the evening was presented by C. E. Wilkinson on the "Relation of the Heart and Kidneys in Disease."

After discussion by Drs. Fairhall, Miller, McCaughey, Jones, Wilkinson and others the discussion was closed by the essayist.

The second paper on the "Treatment of Nephritis" was ably presented by Dr. Leroy Jones. The subject was presented by giving the classification of the different forms of Nephritis and then took up the different points in the treatment, as to diet, medicine and the importance of the manner of living in those suffering from any form of Nephritis. The subject was presented in an able and instructive manner and a discussion followed in which H. F. Becker and others took part. The essayist closed the discussion.

Dr. Leitzbach reported an interesting case in which high temperature 103° to 105° continued for several weeks and was not affected by the use of antipyretics and cold baths. Widall and Diazo tests were negative. A positive diagnosis was not made in the case.

Dr. Robt. McCaughey reported an interesting case of hemianesthesia in which a diagnosis was made of toxic condition producing the anesthesia.

The society adjourned to meet the second Monday evening in May.

The regular monthly meeting of the Vermillion County Medical Society was held in the Council Chamber March 13, 1905, with the president in the chair.

The minutes of the last meeting were read and adopted.

The Committee on County Fee Bill reported recommending the Tri-County Fee Bill for County Fee Bill. After some discussion the bill was referred back to the committee to take further action and report at the next meeting.

The committee on printing the constitution and by-laws reported and the society instructed the committee to have the printing done before the next regular meeting.

A resolution was passed recommending to his Excellency, Gov. Chas. S. Deneen, the name of Dr. J. W. Pettit for the position of secretary of the State Board of Health.

A communication from the secretary of the State Board of Health in regard to containers

for sending specimens to the laboratory established by the Board of Health for bacteriological research was read after which the secretary was instructed to send for a supply of the containers and have in readiness for physicians use.

The first paper of the evening was presented by Dr. Benj. Gleeson on "Relation of Iritis to Systemic Diseases, its Diagnosis and Treatment."

The essayist presented the subject in a very interesting manner, laying stress on the importance of an early diagnosis.

The discussion was opened by Dr. I. E. Huston followed by Dr. E. E. Clark and closed by Dr. Gleeson.

The second paper of the evening on "Indications and Contra-Indications for Operation on the Mastoid," was ably presented by Dr. E. E. Clark. The essayist emphasized the necessity of operation on all cases of chronic suppurative Otitis Media and said that the operation if carefully performed always proved successful.

Dr. Benj. Gleeson opened the discussion stating that statistics were not sufficiently favorable to operative procedures to justify operating on all cases but thought that operation was indicated at times. Dr. Huston followed in the discussion and the discussion was closed by the essayist.

Members present—F. N. Cloyd, Joseph Fairhall, E. E. Clark, H. F. Becker, A. J. Leitzbach, R. A. Cloyd, W. A. Lottmann, I. E. Huston, E. B. Cooley, Solomon Jones, M. Sahud, Benj. Gleeson, C. P. Hoffman, H. S. Babcock, V. C. T. Kingsley, S. M. Black, A. M. Miller and C. E. Wilkinson.

Visitor—Dr. Goodwin of Fairmount.

Meeting adjourned to meet the regular meeting in April.

WAYNE COUNTY MEDICAL SOCIETY.

Regular meetings held in Fairfield the second Wednesdays of January, April, July and October. Membership, 20.

Officers.

President W. M. Johnson, Johnsonville
Vice President J. D. Harlan, Fairfield
Secretary J. P. Walters, Fairfield
Treasurer F. Bean, Fairfield
Censors: T. J. Hilliard, Jeffersonville; W. C. Sibley, Fairfield; B. E. Garrison, Wayne City.

The society met in Drs. Walters and Harlan's office, Wednesday, April 12, 1905, President W. M. Johnson in the chair.

The regular program was not carried out but the afternoon and evening was spent in reminiscences, detailing cases and narrating incidents by different ones present which was highly relished by all those present.

Before separating it was decided to hold a meeting some time in May to elect officers for the ensuing year and to transact whatever business may come before the society.

The annual dues were paid by those present and the society adjourned to meet in Fairfield in May, the exact date to be fixed later.

McLEAN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Bloomington the first Thursday of each month. Membership 95.

Officers.

President.....A. L. Fox, Blomington
 Vice President.....W. R. Shinn, Chenoa
 Sec'y-Treas.....Robert A. Noble, Bloomington
 Board of Censors: J. K. P. Hawks, chairman;
 E. L. Brown and J. L. Yoltan.
 Delegate to State meeting, F. C. Vandervort.

The regular meeting of the McLean County Medical Society was called to order by the President, F. C. Vandervort, at 8:00 p. m. The minutes of the previous meeting were read and approved.

The Secretary reported for the Committee on Publication, that the Pantagraph Printing and Stationary Co., were the best equipped and had submitted the most satisfactory price on the estimate of the publication of the History of the McLean County Medical Society. Upon motion of Dr. J. B. Taylor, the incoming president and the present committee were instructed to complete arrangements with the above company and have the history published.

Dr. W. E. Guthrie reported for the Committee on Banquet for the May meeting. He was instructed to charge \$1.50 per ticket. Any expense in excess of the receipts from the sale of tickets is to be paid for out of the treasury.

A communication from Dr. C. E. Black was read stating the report that Dr. Black had made to the council regarding the report of the Committee of Arrangements for the last Annual meeting of the Illinois State Society. Same was ordered placed on file.

Communication from Dr. C. E. Black regarding the proposed bill now before the Legislature to place an Osteopath on the State Board of Health. A copy of the letter sent to each of the members from this district was read together with the impertinent reply of the Dishonorable Senator Stubblefield.

The report of the treasurer was read, showing a balance in the treasury after all bills to date were paid, of \$126.65.

Dr. C. E. Chapin moved that the secretary be allowed \$25.00 for his services as secretary-treasurer for the year 1904; seconded by Dr. T. W. Bath. Motion carried.

This being the annual meeting of the Society the election of officers for the ensuing year was held and resulted in the election of the above members to serve the society for the year 1905.

This being the completion of the regular order of business, Dr. G. N. Kreider, Editor of the Illinois State Medical Journal, was introduced and presented an interesting and instructive paper on "Senile Gangrene."

Dr. Kreider laid special stress on the importance of making the amputation high above the seat of the gangrenous area and emphasized the point that it was useless to wait for the so-called line of demarcation.

The series of cases presented by Dr. Kreider shows most excellent results, only one case having died in less than one year following the operation.

The Society expressed its thanks to Dr. Krei-

der for the very excellent presentation of this subject and congratulated him upon his excellent result.

MASON COUNTY MEDICAL SOCIETY.

Regular meetings held monthly in the various towns of the county. Membership 10.

Officers.

President.....H. H. Hanly, Havana
 Vice President.....C. A. Stone, Mason City
 Secretary-Treasurer....A. L. Cook, Mason City
 Delegate to State Society, A. G. Servoss, Havana

The second quarterly meeting of the Mason County Medical Society was held in Havana April 3rd. The above officers were elected for the present year.

ROCK ISLAND COUNTY MEDICAL SOCIETY

Regular meetings are held bimonthly at Rock Island on the second Tuesday. Membership 56.

Officers.

President.....G. L. Eyster, Rock Island
 1st Vice President.....F. H. Gardner, Moline
 2nd Vice President.....J. H. Long, E. Moline
 Secretary.....R. Dart, Rock Island
 Treasurer.....J. E. Asay, Rock Island
 Official Reporter.....F. H. First, Rock Island

The annual meeting of the Rock Island Medical Society was held at the Harper House Rock Island, on Tuesday evening, April 11.

There were thirty-one members present. This being the annual meeting, no set program had been prepared, and the evening was devoted to the business of the society. The officers as above were elected for the ensuing year.

The retiring President, Dr. L. D. Dunn, was elected as our delegate to the State Society, with Dr. G. A. Wiggins as alternate.

The report of the treasurer showed all bill paid, with a balance of \$43.00 on hand.

After the meeting a very enjoyable luncheon was served.

New Incorporations.

The Secretary of State at Springfield has licensed the following corporations:

Liqueadium company, Chicago; capital, \$25,000; manufacturing medical preparations; incorporators, George W. Matthews, Walter Stokes and Drummon O. Scott.

Anti-Septox Medicine company, Chicago; capital increased from \$5,000 to \$10,000.

Methodist Episcopal Deaconess society, Chicago; number of directors decreased from eighteen to five.

Illinois X-ray and Electro-Therapeutic laboratory, Chicago; dissolved.

The Surgical Publishing Company of Chicago, Chicago; capital, \$25,000; print and publish medical books, journals, etc.; incorporators Frank H. Martin, Albert Goldspohn, Frederick A. Besley.

La Salle Avenue Hospital and Training School for Nurses, Chicago; name changed to Lincoln Park Hospital and Training School for Nurses; capital stock increased from \$2,500 to \$60,000.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

MAY, 1905.

NEXT ANNUAL SESSION, ROCK ISLAND, MAY 16, 17, 18, 1905.

OFFICERS:

PRESIDENT—W. E. QUINE, Chicago.

FIRST VICE PRESIDENT—H. C. MITCHELL, Carbondale.

SECOND VICE PRESIDENT, J. F. PERCY, Galesburg.

SECRETARY—EDMUND W. WEIS, Ottawa.

TREASURER—EVERETT J. BROWN, Decatur.

EDITOR—GEORGE N. KREIDER, Springfield.

SECTION ONE.

Practice of Medicine, Medical
Specialties, Materia Medica,
Therapeutics, Etiology, Path-
ology, Hygiene, State Medi-
cine and Medical Juris-
prudence.

M. S. Marcy Chairman
Peoria.

Fred Zapffe,
1764 Lexington st., Chicago.

SECTION TWO.

Surgery, Surgical Specialties,
and Obstetrics.

Geo. L. Eyster.....Chairman
Rock Island.

W. H. Wilder Secretary
103 State st., Chicago.

Committee on Prevention of Tuberculosis.

J. W. Pettit, Ottawa.

C. L. Mix, Chicago.

J. F. Percy, Galesburg.

Committee on Public Policy and Legislation.

Frank Billings, Chicago.

Carl E. Black, Jacksonville.

J. W. Pettit, Ottawa.

The Pres. and Sec'y, Ex-Officio.

Committee on Scientific Work.

M. S. Marcy, Peoria.

Geo. L. Eyster, Rock Island.

The Pres. and Sec'y, Ex-Officio.

The figures before the names
of the Councillors refer to the
Councillor Districts.

The Council.

- (1) J. H. Stealy, Freeport.
- (2) W. O. Ensign, Rutland.
- (3) M. L. Harris, Chicago.
- (4) O. B. Will, Peoria.
- (5) J. Whitefield Smith, Bloom-
ington.
- (6) C. E. Black, Jacksonville.
- (7) E. E. Fyke, Centralia.
- (8) W. K. Newcomb, Cham-
paign.
- (9) J. T. McAnally, Carbondale.

UNUSUAL POSITION OF EDITORIAL ITEMS.

The Editorial portion of the Journal is placed where it is this month in order to give our readers the latest possible information on the matters of interest before the legislature. We are pleased to say that no legislation obnoxious to the medical profession has gotten through this session.

THE ROCK ISLAND MEETING.

For its 55th annual meeting the State Medical Society will convene at Rock Island, on the banks of the Mississippi, opposite Davenport on the 16th, 17th and 18th of May. The three cities together form a com-

munity of 75,000 and are beautifully located on the beautiful and historic stream. The United States Government maintains an immense arsenal on the island at this point, which is a great attraction. The committees have prepared a program of literary exercises and entertainments worthy of the Society and its members and all may be assured of a hearty welcome and a pleasant time.

A great deal of important business will be transacted at this session. Each Society should see that it is represented by at least one member in the house of delegates at each and every one of its sessions. An alternate should be on hand to take the place of the

regular delegate should the latter, for any reason, be called away.

The railway rate, as usual, will be one and a third on the certificate plan. Be sure to secure your certificate when purchasing the ticket and to turn this over to the representative of the railway company as soon as possible after reaching Rock Island.

OSTEOPATHIC BILL KILLED.

During the entire session of the General Assembly, now drawing to the close, there has been a numerous, if not strong, lobby of osteopaths besieging the members of the Senate and House to pass bills permitting them unusual and unjust privileges. They have spent a great deal of money in postage and stationery and the progress made was indicated by the vote received in the Senate, which caused them to believe that Senate Bill No. 311, introduced by Mr. Chaffee, would also pass the House. However, about this time, the medical profession woke up to the necessities of the case and from every county came an avalanche of letters, telegrams, resolutions and personal appeals, which soon placed matters in proper shape. The hearing on this bill took place Thursday, May 4. Dr. W. A. Evans made a very able argument against the bill, as did also Dr. G. W. Webster, and when the motion was made that the bill be not recommended to the House for passage, it was carried by an overwhelming majority and the matter was disposed of for this session at least. When all things are considered, this result is particularly gratifying to the organized profession of the State. In the first place, the legislatures of a number of States have been more susceptible to the blandishment of the bone setters and have given them more or less recognition. In the second place the contest in Illinois developed a condition of affairs which lead to the belief that there was actual danger of

the passage of some sort of a bill favorable to osteopathy. This victory shows again the value of an active organization and demonstrates that the profession can be relied upon when a proper appeal is made to it.

EXCURSION TO PORTLAND.

Arrangements are in progress for special cars for Illinois tourists to go to the Portland meeting. It is proposed now to have special Pullman sleepers leave Springfield about noon June 29th, breakfast at St. Paul, and spend the day in St. Paul and Minneapolis visiting the many points of interest about the twin cities. Ft. Snelling, Lake Minnetonka, Falls of Minnehaha, etc., and leave in the evening for the Yellowstone National Park, where five and one-half days will be spent, and then on to Seattle and Portland. The fare from Springfield will be \$53.50; sleeping car, \$14; tour through the Park, \$49.50.

PIN PRICKINGS.

The *American Medical Journalist*, a little advertising publication hailing from New York, is busily engaged in caricaturing the editor of the Journal of the American Medical Association in attempted revenge for the establishment of the Council of Pharmacy and Chemistry. Mention is made of the facts only to offer an explanation. The *Journalist* is conducted by Mr. O. Gorman, an advertising agent of New York who is son-in-law to Dr. J. J. Lawrence proprietor of the *Medical Brief* and of various drug factories. Dr. Simmons of course can stand it, and the medical profession will not mind this opposition to its best interests when the source is fully understood.

The founding of the Council of Pharmacy and Chemistry by the American Medical Association bids fair, after the necessary preliminary period of friction, to be rated one of the greatest forward steps ever taken by the medical profession of America.

WHEREAS, The physicians of Stephenson County, Illinois, are not in sympathy with certain bills now before the Legislature of our State asking for special legislation, as set forth in Senate Bills Nos. 269 and 311, soon to be up for vote,

Resolved, That we the members of the Stephenson County Medical Society, urge the representatives from this Senatorial district to use their influence, and co-operate with the medical profession in maintaining the standard of medical requirements in our State, and not permit recognition of any sects or isms, whose excuse for existence is in name only. Medicine is broad enough to take in all good, reliable therapeutic measures, of tried and well known value, and an effort to restrict to certain lines of treatment in all cases is not proper treatment in a large per cent of them, and an imposition on that per cent of the public.

But it further resolved that a copy of these resolutions be furnished each of the Representatives from this district and a copy sent to the Illinois State Medical Journal for publication. Signatures:

W. J. RIDEOUT, Pres.	D. C. L. MEASE,
E. J. TOREY,	S. J. BEST,
C. M. HILLEBRAND,	J. A. POLING,
M. J. PLEES,	B. A. ARNOLD,
M. W. BAUMGARTNER,	E. H. BEST,
J. H. FIRESTONE,	L. G. VOIGT,
W. L. KARCHER,	M. B. STIVER,
WM. F. BUSHNELL,	WILLIAM B. PECK,
J. H. STEALY,	E. E. BURNELL,
J. S. CLARK,	R. F. HAYES,
ROBERT J. BURNS,	J. C. BURBANK,
J. F. FAIR,	A. E. SMITH,

NOTICE: Members will please take notice that the railroad rate to Rock Island from St. Louis and all points in Illinois will be one and one-third ($1\frac{1}{3}$) fare for the round trip, on the CERTIFICATE plan. Procure your certificate at time of purchase of ticket. The certificate must be presented to the railroad joint agent at the meeting to have it

vised. A fee of twenty-five (25) cents will be charged by the agent. Tickets are good for three days before the meeting and three days after the meeting.

E. W. WEIS, *Secretary*.

OFFICIAL PROGRAM.

ORDER OF PROCEEDINGS.

Registration Office—First Methodist Church, Cor. 5th Ave. and 19th St.

First Day—Tuesday, 9:00 A. M.

I. Call to Order in General Session by the president (Methodist church)—William E. Quine, Chicago.

II. Report of Committee on Arrangements—C. Bernhardt, Chairman, Rock Island.

III. Announcement by the President.

IV. 9:15 a. m. Call to Order of Section One. in Public Library Hall, 4th Ave. and 19th St.

V. 9:15 a. m. Call to Order of Section Two, in Methodist Church.

VI. 1:00 p. m. Adjournment.

First Day—Afternoon.

VII. 2:00 p. m. Call to Order for Continuation of Sections One and Two.

VIII. 2:00 p. m. Call to Order of the House of Delegates by the President, in Assembly Room of the Public Library.

IX. 2:30 p. m. Trolley ride for visiting ladies through Davenport, Moline and Rock Island, with short stop at the Watch Tower Inn for light refreshments.

First Day—Evening.

X. 8:00 p. m. Call to Order by the First Vice President, H. C. Mitchell, Carbondale, (Illinois Theatre 2nd Ave. and 16th St.)

XI. Invocation—Rev. R. B. Williams, D. D., Rock Island.

XII. Vocal Vocal Solo—Mrs. Pauline Waltman Brandt, Chicago.

XIII. Address of Welcome—Hon. Geo. W. McCaskrin, Mayor of Rock Island.

XIV. Address of Welcome on Behalf of the Rock Island County Medical Society—Geo. L. Eyster, Rock Island.

XV. Response on Behalf of the Society—President Wm. E. Quine, Chicago.

XVI. President's Annual Address—Wm. E. Quine, Chicago.

XVII. Address; Section One—J. W. Pettit, Ottawa.

Second Day—Wednesday Morning.

I. 9:00 a. m. Call to Order for Continuation of Section One (Library Hall) and Section Two (Methodist Church).

II. 10:00 a. m. Carriage Ride for Visiting Ladies to Rock Island Arsenal.

III. 1:00 p. m. Adjournment.

Second Day—Afternoon.

IV. 2:00 p. m. Meeting of the House of Delegates.

V. 3:00 to 6:00 p. m. Reception for visiting ladies given by Mrs. C. Bernhardt at her residence, 6th Ave. and 18th St., assisted by Dr. Emily Wright, Dr. Emma Morgan, Mrs. Craig, Mrs. Comegys, Mrs. Eyster, Mrs. DeSilva, Mrs. First, Mrs. S. B. Hall, Mrs. B. F. Hall, Mrs. Ludewig and Mrs. Sala.

VI. 6:30 p. m. Excursion and Reception on Steamer "W. W." Refreshments on the Boat.

Third Day—Thursday Morning.

I. 9:00 a. m. Call to Order of Sections. Papers and Discussions.

II. 10:00 a. m. Call to Order in General Session (Methodist Church) by the President to Receive Report of House of Delegates.

III. 1:00 p. m. Adjournment.

Third Day—Afternoon.

IV. 2:00 p. m. Call to Order for Completion of Sections One and Two.

V. Introduction of the President Elect.

VI. Final Adjournment.

PROGRAM.

SECTION ONE.

Practice of Medicine, Medical Specialties, Materia Medica, Therapeutics, Etiology, Pathology, Hygiene, State Medicine and Medical Jurisprudence.

Chairman.....M. S. Marcy, Peoria
Secretary.....Fred Zapffe, Chicago
Address.....J. W. Petit, Ottawa

What we must Learn and Unlearn in the Treatment of Tuberculosis.

1. Present Status of Serum Therapy.....
.....E. R. Larned, Chicago
2. Practical Significance of Certain Common Symptoms in the Upper Abdomen.....J. F. Percy, Galesburg
3. Indormescent Shock..H. T. Patrick, Chicago
4. The Consideration of Late Hereditary Syphilis.....R. R. Campbell, Chicago
5. Percentage Modification of Milk in the Home.....Chas. R. Spicer, Springfield
6. The Tuberculosis Problem in Illinois..
.....Homer M. Thomas, Chicago
7. The Importance of Diet in the Treatment of Tuberculosis.....
.....Miss Adella Sater, Ottawa
8. Mixed Infection in Tuberculosis with some Consideration as to Treatment
.....Ethan A. Gray, Chicago
9. Climatic Treatment of Tuberculosis with Special Reference to Colorado
.....C. L. Wheaton, Chicago
10. Typhoid Fever....G. G. Craig, Rock Island
11. Differential Diagnosis of Small-pox (Lantern Slides).....
.....Heman Spaulding, Chicago
12. The Value of Isnordia Palustris in the Treatment of Erysipelas—Report of Cases..H. C. Mitchell, Carbondale
13. Pericarditis.....J. H. Bacon, Cleveland, O.
14. Scrofula.....H. G. Anthony, Chicago
15. The License and Control of the Practice of Medicine in the State of Illinois.....Geo. W. Webster, Chicago
16. Diagnosis of Chronic Nephritis.....
.....Chas. L. Mix, Chicago

17. Ocular Manifestations of Chronic Nephritis.....A. R. Elliott, Chicago
19. Results of Surgical Treatment of Chronic Nephritis.....
.....A. H. Ferguson, Chicago
20. Report of Three cases of Intermittent Claudication....S. R. Pietrowicz, Chicago
21. The Glycosuria of Hepatic Insufficiency.....A. C. Crofton, Chicago
22. Respiratory Oxidation Stimulants in Nephritis, Pulmonary and Allied Crises.....Geo. F. Butler, Chicago
23. Febrile Symptoms of Hepatic Syphilis.....Jos. L. Miller, Chicago
24. Parenchymatous Keratitis and Subsequent Irido-Chroiditis with Loss of Vision.....Chas. H. Brobst, Peoria
25. Syphilitic Meningitis in Children...
.....W. J. Butler, Chicago
26. Educational Treatment of Neurosthenics.....Chas. D. Center, Quincy
27. Gastric Fatigue.....F. B. Turck, Chicago
28. Some Phases of Disturbed Metabolism
.....R. W. Webster, Chicago
29. Some Eye Problems the General Practitioner is Called on to Solve.....
.....R. J. Tivnen, Chicago
30. Variola.....L. A. McFadden, Peoria..
- 31...Poisoning from Oil of Wintergreen,
.....F. C. Vandervort, Bloomington
32. Cardiospasm or Idiopathic Dilation of Esophagus.....B. W. Sippy, Chicago
33. Title later.....S. W. Miller, Peoria
34. Air examinations: Their Importance and Results.....A. Gehrman, Chicago
35. Intestinal Parasites.....F. Smith, Urbana

THE PRACTICAL SIGNIFICANCE OF CERTAIN SYMPTOMS IN THE UPPER ABDOMEN.

By J. F. Percy, M. D., Galesburg, Ill.

Introduction: The overlooking, in this region, of the pathology on which these symptoms are based, is one of the strange chapters in the history of diagnosis.

The common symptoms are pain due to cholecystitis, ulcer of the stomach, and of the duodenum, together with the formation of gas due to inhabited peristalsis. Vomiting is also mentioned; but nausea is a more prominent symptom than the former. Bleeding is also to be noted as one of the symptoms.

The significance of these can best be determined by percussion, palpation, and noting costal resistance, especially in the right side. Laboratory methods are of confirmatory value only. Alone they cannot make the diagnosis.

The periodicity of the attacks from ulcer of the stomach and the duodenum are insisted upon, as is also that fact that a cholecystitis or an ulcer of the stomach will account for many of the chronic lesions of the liver and the pancreas. Both of these facts are new to the literature of this great subject.

INDORMESCENT SHOCKS.

Hugh T. Patrick, Chicago.

The author calls them "indormescent" because

they ordinarily occur just as the patient is falling asleep. The shocks may be divided roughly into motor and sensory. Mild motor shocks, or simple starts, may be regarded as normal, but in some persons they reach a degree, which is pathological and in others attain a violence sufficient to make them worthy of medical consideration and special treatment. The sensory form may affect general sensation or the special senses. The manifestation occurs as a symptom of functional disease and in the vast majority of cases is of no grave significance, although the shock is a most alarming sensation for the patient. Illustrative cases. Treatment.

THE GLYCOSURIA OF HEPATIC INSUFFICIENCY.

Alfred C. Croftan, Chicago.

Abstract—The frequency of sugar excretion in functional disorders of the liver. The dangers of treating a patient afflicted in this way as a diabetic. The causes, symptoms and treatment of this variety of non-diabetic glycosuria.

THE EDUCATIONAL TREATMENT OF NEURASTHENIA—Abstract.

Chas. D. Center, Quincy.

A. The author claims that drug treatment alone is practically valueless; that while Brower's definition of 'Neurasthenia an exhaustion of the neuron, the effect of defective metabolism,' is perhaps as good a brief definition as can be made, still it does not provide for the getting hold of the mentality of the patient, and without such control medicine in neurasthenia has only partial effect.

B. The point is made that each neurasthenia patient has a "chief obsession," and that once this is overcome, all minor symptoms are abated.

C. A number of cases are given, showing the chief obsession in each, and the means used to remove it.

D. The doubtful benefit of strychnine in neurasthenia.

SOME EYE PROBLEMS THE GENERAL PRACTITIONERS IS CALLED UPON TO SOLVE—Abstract.

Richard J. Tivnen, Chicago.

1. Importance of eye findings as an aid to diagnosis and prognosis of general disease. Nephritis, diabetes, locomotor Ataxia, rheumatism, syphilis.

2. Possible sources of error in the diagnosis and management of; (a) Foreign Bodies; (b) Iritis, Conjunctivitis, Scleritis, Glaucoma.

3. Use and mis-use of cocaine and atropine.

4. Treatment of cross-eyed children.

SYPHILITIC MENINGITIS IN CHILDREN.

Wm. J. Butler, Chicago.

Report of case with sudden onset; chill, high temperature, semi-comatose, diffuse maculopapular eruption. Result of spinal puncture.

Blood examination. Exchanges. Localized paralysis. Treatment. Result. Present status.

PELVIC INFECTIONS.

Abstract of Paper of Dr. T. J. Watkins.

Pelvic infections is preferable to pelvic inflammation as a name to designate the disease, as infection injure and destroy tissues, whereas inflammation tends to conserve tissue.

An attempt will be made to limit the paper to a discussion of some of the practical points of pelvic infections:

Importance of the disease.

Same principles are involved in pelvic infections as in infections in other parts of the body.

General consideration of the etiology, pathology, symptomatology, diagnosis, prognosis and treatment.

Importance of Prophylaxis.

Topical applications are often of little or no value.

Conservatism during the acute stage is of great importance.

Spontaneous and complete recoveries sometimes result.

Hereditary Syphilis.

R. R. Campbell, Chicago.

Our means of diagnosis. Importance of Hutchinson's symptoms. The skin manifestations. Findings in the fundus of the eye, etc.

Mortality from pulmonary tuberculosis at various periods of life from statistics compiled during the last census year.

The enactment and enforcement of laws relating to hygienic and sanitary measures, the construction of State sanatoria for the care of the afflicted element among the poor.

The climatic treatment of tuberculosis, differences of opinion relative to the value of the arid regions as compared to the home climate in the arrest of the disease.

The success of the Ottawa Tent Colony.

The tuberculosis problem to be solved at home. Conclusions based upon long residence in Colorado and observations made in New Mexico and Arizona. Care to be exercised in prescribing climate. The climate of Colorado. Atmospheric conditions; Denison's observations of 1876. The city of Denver, its hospitals and facilities for caring for the sick. Effects of altitude on pulse and respiration at an elevation of ten thousand feet. The class of cases to be sent to Colorado; the effect of an altitude of 5000 feet on the pulmonary invalid. Importance of early recognition of the disease as advocated in New York Medical Journal, Aug. 27, 1904. Conclusions relative to climatic treatment of tuberculosis in properly selected cases.

Abstract.

Report of a case of labor in a woman with a double dislocation of the hips. Death of the fetus followed by craniotomy; pregnancy in the same case later followed by Caesarian Section. Some suggestions regarding operation in cases of contracted pelvis.

THE PRESENT STATUS OF SERUM THERAPY.—Abstract.

By E. R. Larned, M. D.

1. What is meant by Serum Therapy.
2. Classification of Sera as used in Medicine.
 - a. Curative Sera.
 - b. Diagnostic Sera.
3. Classification of Sera as to efficacy.
 - a. Those of demonstrated efficacy.
 - b. Those whose value appears probable but remains to be proved.
4. Methods used in elaboration of Sera.
5. Classification of Scientific Workers in Sera.
6. Brief outline of the present status of the following Sera.
 - A. Those of demonstrated efficacy.
 1. Antidiphtheritic.
 2. Antitetanic.
 3. Antiplague.
 4. Antistreptococcc.
 5. Sera for Exophthalmic Goitre.
 - B. Those whose value appears probable but remains to be proved.
 1. Serum for Hay Fever.
 2. Tuberculin.
 3. Antityphoid.
 4. Antirabic.
 5. Antitubercle.
 6. Antivenine.
 - C. Those whose efficacy is nil.
 1. Antipneumococcic. Sera.
 2. Antiscarlatinal. Sera.
 3. Antidysenteric. Sera.
 4. Antivarioloid. Sera.
 5. Antitoxin for Cerebro-Spinal Meningitis.
 6. Serum for Rheumatism.
 7. Serum for Syphilis.
 8. Serum for Anthrax.
 9. Cancer Serum.
 10. Leprolin.

Variola.

This malady will be treated under its usual classifications. Some kodak pictures will be exhibited and experience given.

News Items.

Dr. M. D. Foster is mayor of Olney.

Dr. T. C. McCord has been elected Mayor of Paris.

Dr. J. L. Kerrell, of Medora, has located at Thebes.

Dr. J. M. Duncan has been elected Mayor of Pawnee.

Dr. G. W. Ross has been elected Mayor of Carrollton.

Dr. Jesse McDavid, of Litchfield, has located in Decatur.

Dr. Walter H. Allyn has been elected Mayor of Waverly.

Dr. Priest has moved from Buffalo Hart to Williamsville.

Dr. Wm. Englebach, of Arenzville, has located in Omaha, Neb.

Dr. J. T. Williams, of Nebo, has written a poem entitled "Illinois."

Dr. Rudolph W. Holmes has removed to 412 North State St., Chicago.

Dr. W. A. Mudd, of Athens, was elected mayor at the last election.

Hudson James, M. D., of McLean County, died March 27; aged 61 years.

Dr. T. F. Hill of Athens, has been elected president of the school board.

Dr. Elizabeth Matthews, of Springfield, has gone to Europe on a vacation.

Dr. E. R. Motley, of Virden, has been elected a member of the school board.

Dr. Roy F. Rogers, of Shelbyville, has gone to Europe for post graduate study.

Dr. C. M. Bowcock, of Springfield, is convalescent after an operation for gall stones.

Dr. S. R. Hopkins, of Springfield, expects to go to Europe in June for a year's post graduate study.

Dr. F. C. Harnish has removed his office to suite 1122 Republic Bldg., State and Adams Sts., Chicago.

A chicken brooder is taking the place of an expensive incubator at Tallula. Twins are thriving in it.

Dr. D. N. Eisendrath has removed his residence to 4840 Woodlawn avenue, Chicago. Telephone 717 Oakland.

Dr. L. H. Abele has removed his office to the Republic Bldg., Chicago. His practice is limited to diseases of the eye.

Dr. McClelland, of Williamsville, will remove to Springfield, where he will erect a handsome residence and retire from practice.

Dr. Norman Kerr, of Chicago, has removed his residence to 275 LaSalle ave., where his office hours are from 6:00 to 7:30 p. m.

Dr. Anna B. Schultz of South State St., Chicago, recently testified that she had given gifts to policemen who had turned business her way.

A young physician, unmarried, wishes to connect himself as an assistant to a well known physician or surgeon. Those wishing a conscientious man and hard worker, address mail to Dr. D. Ricardo, 4419 Indiana Ave.

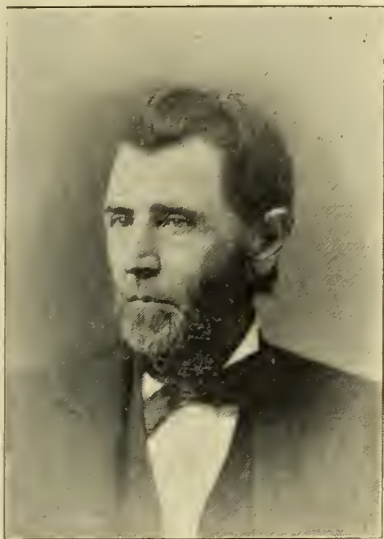
A doctor named Barker succeeds Osler at Johns Hopkins. This seems an especially appropriate selection—considering what a howl went up when Osler left.—Springfield State Journal.

Dr. W. L. Rukenbrod, of Decatur, on March 31, was the target for pistol practice by a Mrs. Thos. D. Loomis. The cause is said to have been remarks made by the physician about the character of his assailant.

The Christian County Medical Society met at Taylorville April 20th and elected officers for the ensuing year as follows: President, C. L.

Carroll, of Taylorville; first vice president, C. W. Coe, of Stonington; second vice president, R. W. Reasoner, of Morrisonville; secretary-treasurer, D. F. Morton, of Taylorville.

Dr. Warner is the father of Col. V. Warner, present Commissioner of Pensions, and father-



Dr. John Warner.

in-law of Dr. Harrison Mettler, of Chicago. He began practicing medicine in DeWitt County in 1841 and rode on horseback often 50 or 60 miles to see a patient. Before the Civil War

Frederick Leo Orsinger of LaSalle, Ill., has begun suit for mandamus to compel the state board of health to issue to him a certificate permitting him to practice medicine in Illinois. The suit comes after the doctor has practiced for more than thirty years in this country after graduating, he says, from a school of medicine in Zurich, Switzerland.

Dr. Edward J. Barcal of Chicago, has been sued for divorce by his wife, who alleges that he fractured her rib by a blow when asked for money to buy food. She also asserts that her husband abandoned the practice of medicine to become a private detective and that recently he was fined and sent to the bridewell for beating her. She was given an injunction forbidding Barcal to molest her at 227 Sangamon St.

Ground was broken recently for the new Michael Reese hospital to be erected on the old site at Twenty-ninth street and Groveland Park avenue. President H. F. Hahn of the United Hebrew Charities spoke, and the first spadeful of earth was turned by Isaac Greensfelder, who performed the similar duty twenty-five years ago at the beginning of the old building. The new structure will cost around \$500,000.

Dillman, F. S., M. D., of Ingraham, was fatally injured April 2 in a runaway and died Tuesday, April 4th. He was returning from a professional visit at midnight when the accident occurred. He was found unconscious and taken to his home where efforts were made to prolong his life by his relative, Dr. J. V. Dillman, of Bible Grove, and Dr. Geo. T. Weber of Olney. He was 35 years old and graduated at the Missouri Medical college in 1898.



Warner Hospital, Clinton, Illinois.

the doctor retired from practice and went into the banking business and accumulated a great fortune, being considered one of the wealthiest men in the State. He is still in good health and attends to a part of his large business.

How They "Keep up a Front."

Dr. Alfred J. Burdick, of Ravenswood, is conducting a popular sprightly journal entitled, "The Way to Win." He contributed to the April issue a five page article on "Where Shall

the Young Doctor Locate." From this we extract the following of interest concerning professional life in Chicago:

Not long ago a very distinguished physician died in Chicago. He stood veritably at the head of his specialty and attended the very best families. His practice was enormous and his fees princely; but he worked like a stevedore—so hard in fact that his health was ruined, and that brought about the end of it all, for he killed himself by overwork. Such a successful man surely had accumulated enough to make his family comfortable? The last six months of his life he was an invalid, and during this time he lived upon a \$10,000 fee that he received for his last case. Nothing was left.

I was talking some time ago with a friend of mine, a physician, concerning the doctors on his street, six or eight of them. He went over the list:

"Dr. B.," said he, "has a job at the city hall which takes part of his time. A ekes out a living with life insurance work; C does hack work for the medical papers; D teaches at a medical school to help out expenses; E does detail work for a drug firm"—and so he went through the list. Only one of these doctors, all of whom were successful and prosperous, so far as the outsider could judge, was making a living entirely from the practice of medicine. This is the history of thousands of physicians in Chicago and other large cities. They are veritably "hanging on by their eyebrows" waiting for the opportunity to come along which shall bring them success and meanwhile many of them are living by makeshifts.

Medicine Peddler in Trouble.

Rushville, March 27.—Special.—The third trial against M. L. Ryan for selling medicines without a license will be called Thursday. At the last trial the prosecution put on 250 witnesses to prove he peddled medicine without a license. The defense was that he was not a peddler, but the agent of a reliable house at Winona, Minn. The jury deadlocked in the second trial as they did in the first.

Jungles Jugulated.

Charging unfair treatment, William Witry Jungles began mandamus proceedings yesterday to compel the trustees of the University of Chicago and of Rush college to issue to him a certificate as doctor of medicine.

Jungles, who formerly attended the University of Michigan, says he became a student at Rush college in September, 1897, and remained there until June, 1900. He again entered in October, 1903, expecting soon to complete his work, but he was not graduated.

The plaintiff declares he has passed all his examination and has acquired sufficient knowledge of the practice of medicine and surgery.

LIVINGSTON COUNTY NEWS NOTES.

Dr. Henline has located at Graymont.

Dr. H. H. Dally, of Blackstone, has gone to Mexico where he expects to regain his health.

The semi-annual meeting of the Livingston County Medical Society will be held in Pontiac May 4th.

Dr. A. B. Middleton, who has been spending the winter in Florida for the benefit of his health, will return May 1.

Dr. J. D. Scouler, Jr., has formed a partnership with his father at Pontiac, where they have furnished a new suit of offices.

Dr. Breeze, who practiced for several years in Odell, recently died at Joliet. The funeral was held from his home in Odell.

Dr. Asa Cooms, of Suggert, who is druggist, grocer, doctor and postmaster, was recently defeated in a race for justice of the peace.

The "Can't Work a Pull" club was recently organized in Pontiac by two physicians, but at the first meeting there was not enough members to fill the three offices, and it was concluded to disband because no other qualified members could be found.

Six months ago Pontiac did not have a hospital, but today she has three in the course of construction.

Dr. E. H. Fitzpatrick recently purchased a warehouse and is reconstructing it for the purpose of a hospital.

The St. Francis sisters have purchased a residence and will soon open it as a hospital.

Dr. J. A. Claybourne has begun the erection of a new hospital building.

The people of this city have been agitating the advisability of building a hospital, but no one expected that it would so soon become the greatest hospital city in the state.

Dr. William B. Whitaker has opened an office, suite 400 Reliance Building, 100 State St., Chicago. Office hours 12 to 2 P. M.

Dr. G. Frank Lydston of Chicago has recently purchased an apartment house on Lake avenue for \$35,000.

Dr. Edward Duke of Danville, has recently purchased a practice at Coin, Iowa.

Surer Thing.

The Doctor—"Doesn't this scheme for making gold out of sea water appeal to your cupidity?"

The Druggist—"Not a bit. I'm doing fairly well with mineral water."

Profits by the Doctor.

Robinson—"It seems as though women had a mania for spending money."

Rawlins—"I know it. Why, whenever my wife is too sick to go down town shopping she sends for the doctor."—Judge.

HOW TO LIVE.

One of the difficulties which beset the doctor on every side is that he is subject to constant misrepresentation, vilification and abuse, even from those who ought to be his heartiest defenders. Every now school, cult, or religion; every alleged "reform," social or economic; every new stripe of quackery (and their name is legion) commences its propaganda with an attack upon the medical profession. Even the unthinking clergy, who benefit more from the charity of the profession than any other class, and who should be as deeply interested in the physical as in the spiritual welfare of their people (*mens sana in sano corpore*) all too often lend their influence to our undoing, through their free-will offerings of testimonials to the patent-medicine fakirs and nostrum-venders who, under the guise of curers of the sick, are preying like vampires upon the public, fairly forcing their rum-remedies down the throats of the all-too-gullible public by means of their lying advertisements, supported by "testimony," bought, garbled or stolen, and made to fit their nefarious scheme of destruction—not infrequently using as their strongest argument "recommended by the medical profession."

To a certain extent medical men (you, doctor) are themselves responsible for this condition of things, because they have so hedged themselves about with the ill-advised reticence which they honestly, though erroneously, believe is enjoined by the "code," that they will not rise in their own defense; and the public press, which fattens upon the advertising of these frauds, loses no opportunity to furnish any misinformation which tends to weaken the faith of the public in the doctor.

It has become a problem, how we are to put ourselves right with the people; how we are to let them understand something of the marvelous work our scientists are doing; how disease is being blotted out by the ablest and most disinterested work for humanity that any class of men ever attempted; how medicine may and does relieve and cure and, not less important, how they, the people, are being victimized by a veritable "trust" of these soulless money-sucking vampires who not only fatten on their real misfortunes but the more so upon those most exacting imaginary ones for the creation of which they themselves are responsible.

There are a number of so-called popular medical journals. Some (a very few, of these are excellent; more are questionably tolerable, most are abominable. Even those of the better sort are, to a considerable degree, the organs of individuals or corporations with private interests or peculiar ideas to conserve or promote; few, very few, (we cannot think now of one) have in any sense at heart the interest of the doctor and the preservation of his influence in the community for the good and welfare thereof. Many (even most) of these journals are openly antagonistic to the doctor; are doing everything in their power to destroy his hold upon the people, and to paint him as a creature to be distrusted and feared, as a man actuated by the grossest self-interest—a something to be shat-

tered in favor of the special fad or fake which they promote.

Posing as advocates of physical culture, food fads and other foolishness, magnifying the possibility of the so-called "natural methods of cure"—mind cure, suggestion and the like (and always against the doctor), these sheets are exerting a tremendous influence upon the country, and a most dangerous one. All or nearly all of them are fighting vaccination, serum therapy (antitoxin, etc.) and directly or indirectly all methods of medicinal therapeutics. But run through their advertising pages and you will find represented the most vicious and "suggestive" things that can (but should not) escape the toils of a post-office fraud-order. We know that behind at least one of these magazines, one claiming a circulation of over 100,000, stands one of the most-widely advertised and most dangerous rum-remedy institutions, whose alleged cure-all, stronger in alcohol than whisky, and many times stronger than beet, against which so much is and may well be said, is engrafting more evil on humanity in general than a thousand open saloons, and accursed as they are, is more to be dreaded for its insidious influence than is almost any other evil within our ken. And this is the kind of "medical literature" that is moulding the minds of the people! This is what is taking from the doctor the very bread of his mouth and using it to kill the soul and body of his neighbors and his friends.

There should be a popular journal behind which the doctor can stand. There is one! In *How To Live*, of which Dr. George F. Butler is editor-in-chief, we have a journal published by doctors, intended to "hold up the hands" of the medical profession in its struggle to better the condition of men and women; and to this journal we give our unqualified endorsement and support, urging you, brother, to receive it with open arms and to secure its widest possible introduction in your community, that the truth may be known, and knowing it that your people may be able to oppose the wiles of the devil and be led to come to you in their time of need for that help and advice which, in its very fullness, you are so well able to give.

There are certainly few if any men better fitted than Dr. Butler to assume the leadership in this great work. He is a general practitioner of wide experience; as superintendent of the Alma Sanitarium for years, he has come into intimate touch with the most modern methods of treating disease, both with and without drugs; he is a teacher of therapeutics and practice in the Medical Department of the University of Illinois, and the Dearborn Medical College, both of Chicago, and is a well-known and polished writer of medical books and of general literature as well.

How To Live and its editor have taken common cause with ourselves; they are now part of us; we have entered heart and soul into this work. The magazine, removed from Alma, Mich., will hereafter be issued from the Clinic office, and we propose to use our utmost efforts to make it such a journal that every doctor will

see and feel in it an ally in which he can confide and will not rest until he has introduced it into the homes of his clientele. It will be clean from beginning to end. There will be no medical advertising of any sort admitted—nothing, if we know it, the spread of the knowledge of which directly or indirectly, will take one dollar from the doctor. Through **How To Live** we propose to instill into the minds of its readers that it is their duty to guard against these fakes and shams, and to go to the doctor when they are sick—that self-medication is always dangerous, usually disastrous and often deadly.

How To Live will be a family magazine, with departments for father, mother and the children—stories, poetry and the best of good advice on everything that interests and concerns the home. It is not to be a "health journal," but a help to right living—a help to every one who really wants to know "how to live." In other words, we propose to make it such a journal that you simply must have it on your home-table as well as in your waiting-room; so good and helpful that you will feel impelled to say to your patrons: "John, Mary, here is something you ought to have in your family; it's just the thing for yourself and the children; it will help you to live right."

How To Live is devoted to the health, happiness and betterment of the people. Through it we are going to fight the fight of the doctor among the people, and he will and must help us. As doctors we are going to "nail" the lies that are being told about us; we are going to stand up for truth and right; we are going to let in light on quackery and its methods; we are going to strike "with might and main" the alcoholic nostrums and habit-forming drug dopes and show their dangers; we are going to do our part to maintain the sanctity of the home, to carry a message of real genuine love and helpfulness; one that shall encourage and inspire all who read our pages. In **How To Live** we shall point the error as we see it and strive to show "the better way" of heart, of body and of mind, in home and in society; the true sociology of right living.

There will be nothing "namby-pamby" about **How To Live**, on the contrary it will be "very much alive;" and we ask you to stand behind the movement. Will you do it? Hundreds of the Clinic family, to whom the idea has already been presented, have answered "yes" with the subscriptions. Won't you? (See ad page 78 for business announcement and subscription form.)

Brother, it is worth your while! You owe it to yourself to support this work—to help us to help you—and we want you to do it! We are in it, heart and hand, for real, genuine, helpful betterment. If you are with us, say "yes" with your subscription and bring your friends with you.

Dr. Frank P. Norbury, after a protracted period of illness, has resumed his consultation practice.

Dr. W. T. Eddy, of Shelbyville, was elected mayor at the last city election.

Marriages and Deaths.

Marriages.

L. G. Allen, M. D., and Miss Effie Felts, both of Litchfield, April 26.

Albert F. Henning, M. D., Chicago, and Miss Mary B. Meager of St. Paul, at St. Paul, Minn., April 26. About a year ago Miss Meager fell seriously ill while visiting in Chicago. She was placed in a private ward in a Chicago hospital, where she first met Dr. Henning, who as an interne attended her. It was a case of love at first sight and before the girl had left the hospital her hand was pledged to Dr. Henning. They were married at St. Mary's church and left for Germany, where Dr. Henning will continue his studies in medicine.

Lawrence P. Crawford, M. D., Earlville, Ill., to Miss Ruth Dixon of Fairview, Ill., March 22.

William Englebach, M. D., Arenzville, Ill., to Miss Fama L. Reynolds of Barry, Ill., at Quincy, Ill., March 27.

Mayfield-Richardson.

Jacksonville, April, 14.—Dr. Brock Mayfield and Mrs. Mary Richardson were married at the home of the bride near Lynville Thursday. The bride is the widow of the late Vincent Richardson, who was regarded as one of the wealthiest men in the county. She is 75 years of age while Doctor Mayfield is 51 years.

Doctor Mayfield is one of the most prominent physicians in the city. The couple were reported to have been married in Missouri about two years ago but no certification of the report could ever be made.

Deaths.

Fletcher S. Dillman, M. D., Missouri Medical College, St. Louis, 1898, who was thrown from a buggy March 26, died at his home in Ingraham, Ill., April 4. He did not regain consciousness after the injury.

Presley A. Rosenberger, M. D., St. Louis Medical College, 1859, of Petersburg, Ill., died at the home of his son in El Reno, Okla., from heart disease, April 8, aged 80.

Abner Crane Williamson, M. D., Ohio, 1879, died suddenly at his office in Champaign, Ill., from cerebral hemorrhage, April 8, aged 65.

William H. Hoskinson, M. D., Miami Medical College, Cincinnati, 1882, died at his home in Trimble, Ill., February 20, aged 50.

Frank S. Filkins, M. D., years of practice, Illinois, formerly of Barrington, died at Arlington Heights, Ill., Feb. 20, aged 65.

Supplement to May issue of the Illinois Medical Journal.

The following bills of particular interest to the medical profession passed both houses and will probably be signed by the Governor:

Senate Bill No. 158—(Mueller)—Placing physicians, internes and nurses of the Cook County Hospital under civil service.

Senate Bill No. 225—(Clark)—Establishing a State board of examiners for nurses. Prohibits other than registered nurses from advertising as such. Gives board authority to regulate the course of instruction in training schools. Does not prevent anyone from nursing. Board to receive \$5 a day for actual services to be paid from fees for registration.

Senate Bill No. 296—(Humphrey)—Chicago Automobile club bill. Requires State registration of motor vehicles, and prohibits cities, towns and villages from making laws regarding in conflict with this measure. Limits the speed in the country to twenty miles an hour and makes numerous other regulations.

Senate Bill No. 226—(Clark)—Creating a board of dental examiners. Requires dentists to be licensed in the same manner as physicians. Examination fee \$5. Board members receive \$10 a day.

House Bill No. 119—(Nagel)—Acquiring bodies of persons dying from infectious diseases to be embalmed by licensed embalmers and providing that the latter shall disinfect the premises where such persons have died.

House Bill No. 414—(Reynolds)—Requiring the State Board of Health to appoint one agent in each county to distribute gratis, pure diphtheria anti-toxine.

House Bill No. 182—(Kleman)—Empowering overseers of the poor to send hydrophobia patients to any institution in the State for the treatment of that disease at the expense of the State, not to exceed \$100 a patient and appropriating \$2,000 to carry out the provisions of the act. Counties are to pay the car fare and other expenses of the patients.

House Bill No. 330—(Glackin)—Appropriating \$25,000 for the establishing of a State Sanitarium for consumptives and creating a board of five members to construct and administer the affairs of the sanitarium.

Vote in Senate on Senate Bill No. 311, for "An Act to regulate the practice of Osteopathy in the State of Illinois."

The vote by which this bill passed the Senate is as follows:

Those voting in the affirmative are: Messrs.

Acton, Anderson, Bare, Brown, Chafee, Dixon, Dunlap, Evans, Hall, Hamilton, Henson, Houser, Humphrey, Jandus, Kunz, Lish, Lundberg, Maher, McElvain, McKenzie, McShane, Powers, Rainey, Rees, Stubblefield, Walter. Yeas—26.

Those voting in the negative are: Messrs.

Bartley, Campbell, Cunningham, Hull, Mueller. Nays—5.



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The Illinois Medical Journal.

EDITORIAL OFFICE, 522 CAPITOL AVENUE, SPRINGFIELD.

Copy for advertisements must reach the editor's office by the 20th of the month in order to secure insertion.

PUBLISHER'S NOTES.

The Journal is not responsible for any medical or therapeutical views expressed in this department.

GYNECOLOGY.

By Henry J. Garrigues, A.M., M.D.

Gynecologist to the St. Mark's Hospital, New York City. Consulting Obstetric Surgeon to the New York Maternity Hospital. Professor of Obstetrics in the New York Post-Graduate Schol and Hospital.

Octavo. 462 Pages; 328 Illustrations. Cloth \$3.00.

J. B. LIPPINCOTT CO. Philadelphia.

Dr. Garrigues' ability as a gynecologist and writer is well known, and in this entirely new work he has devoted the largest share of his attention to Medical Gynecology.

To the practitioner desiring to acquaint himself with the present status of modern gynecology, and the physician willing to refresh his memory or learn the latest details in treatment for a particular case in hand, the book will appeal with peculiar force.

Dr. Garrigues' exceptional facility for imparting knowledge and writing concisely is best exemplified in this his latest work. No space has been given to the history and progress of the science and practice of gynecology, no case histories nor bibliographies have been introduced as padding, but the space so saved has been devoted to differential diagnosis and treatment.

The author teaches how to recognize the nature of the disease or condition, and how to attack it with medical, electrical or surgical remedies. Minor operations which the general practitioner is likely to undertake are described with minute detail. In regard to the others, the chief features are indicated.

The work embraces the abnormalities of all the organs in the female pelvis, inclusive of the urinary organs and the rectum, excepting those conditions which are connected with pregnancy and childbirth, described in the author's work on obstetrics.

The plan is laid in such a way that the reader is gradually led from the simple and easy to the complicated and difficult. For this purpose the book is divided into a general and special division. In the latter the anatomical order is followed, beginning from the outside. For practical purposes, special chapters on hemorrhage, leucorrhea, and sterility are added.

The text is elucidated by a large number of illustrations, many of which are original and based upon the author's own researches, dissections and operations.

Special Trains for the Physicians Enroute to Portland, Oregon.

Arrangements have been completed under which the Northern Pacific railway will run three solid special trains through to the Pacific coast for physicians who will go west early in July to attend the coming sessions of the American Medical Association, the national organization of doctors. The first special will run through from Chicago, leaving June 30 and reaching St. Paul July 1, proceeding west and stopping at Gardiner, Mont., for a 5½ day tour of the Yellowstone National Park. A second solid special train will leave Chicago July 1, reaching St. Paul July 2, and proceeding west to Gardiner for a similar tour of the Yellowstone. A third special train will leave Chicago July 6, running through to Portland with stops at several important points.

The Northern Pacific has been designated the official route for the handling of the physicians and the national officers will go west on one of the first two specials, in both of which accommodations are very nearly exhausted. Arrangements are now being made for numerous small parties for space in the third special and it is possible that additional trains will be arranged for, if the demand for reservations continues heavy. Each special will be made up of standard Pullman equipment, with through dining cars and ample baggage accommodations. Every facility which adds to luxurious comfort enroute is being arranged for and the train schedules have been worked out with especial reference to the convenience of the doctors. The third special will arrive in Portland the morning before the convention opens.

Editors Medical Publications—Especial attention is called to the fact that berth reservations should be made immediately through C. A. Matthews, General Agent Passenger Department, N. P. R., Chicago. The best service can be afforded if the physicians will co-operate in this matter, arranging their plans accordingly. Your assistance in making these facts known will be greatly appreciated.

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THE IDEALS AND THE PRACTICES OF THE MEDICAL PROFESSION.

THE PRESIDENT'S ANNUAL ADDRESS.

BY WILLIAM E. QUINE, M. D., LL. D., CHICAGO.

The nature and grounds of moral obligation is one of the most important questions that can engage the powers of the human mind; for it is fundamental to the well-being of society.

Our ideals, at times, contrast so strangely with our acts—our precepts with our practices—that we cannot help laughing guiltily at the diagnosis of the Psalmist that “All men are liars.”

What a man professes to be is one thing, and what he really is, may be another. Nearly everybody tries to appear better than he is, and to this extent nearly everybody is a pretender.

In these matters physicians are like other people: none are perfect except ourselves, the critics.

What is the criterion of a moral act—the particular feature of the act which enables us to say, on sight, it is right and not wrong and not merely neutral, as between right and wrong?

Without daring to hope to answer this question to the satisfaction of every mind, I shall venture the proposition that a right or moral act is one that conduces to the good of society—society, itself, deciding every question affecting its welfare, through the machinery of the law or otherwise.

Punishment for commission shows an act to be immoral or wrong, in the estimation of the authority deciding the question; and punishment for omission shows the act to be obligatory.

But standards differ in different societies and even under different conditions in the same society.

A Mohammedan woman who exposes her face in public announces herself, thereby, a social outcast; but in tropical islands where conditions of life are primitive and but little clothing is needed, a woman may appear naked without shame.

Similarly, in Christian civilization, women of the most exalted social rank may appear, without hindrance, at ostentatiously pious functions, such as charity balls, so meagrely attired as to stagger less refined and cultured natures; whereas, if they appeared on the street in the same costumes, they would be liable to arrest for disorderly conduct.

In all well-organized communities moral standards of some sort are fixed by law. But many acts tolerated by the law are condemned by popular sentiment; and such condemnation may prove to be a more severe and lasting penalty than legal fine or imprisonment—for it fixes upon the offender the stigma of dishonor.

In relation to such matters, physicians fare the same as others; they stand before their fellows as law-abiding and honorable citizens, or the reverse.

But in addition to these regulating forces which apply alike to all members of society, physicians have another. They have standards of their own. They regard certain acts on the part of their own number as grievous sins which are not regarded as sins at all by the rest of mankind; and through the machinery of their organizations they punish these sins—and, sometimes, with unreasoning severity.

Our profession is called “liberal.” And it is liberal—liberal in its educational ideals, liberal in indulgence in its contemplation of the infirmities of human nature and liberal to prodigality in its benevolences. It is liberal in every relation of life—except in its dealings with its own members; but here, on occasions, it is intolerant to the point of big-

otry and resentful to the point of vindictiveness.

It is a fact of familiar knowledge that offences committed by physicians against the public conscience may be easily tolerated by their own organizations; but offences against the technical standards of the organizations themselves—although quite unnoticed by the community at large—are liable to severe and lasting penalties—especially if the culprit be of humble rank and without friends.

Among misdemeanors of this kind we find advertising in the public prints; the exploitation of remarkable cures and operations; the holding of patents on articles used in the practice of medicine; the pretence of possessing an infallible law of cure; and the acceptance by physicians of commissions on their prescriptions, or on needed appliances which they are instrumental in selling, or on the fees of surgeons received for operations on the physician's patients.

Such acts are always small and surreptitiousness makes them mean; but I fail to see in them convincing proof of gross moral obliquity. Most of them are quite compatible with honorable standing in the community; and yet they are stigmatized by the unanimous vote of the organized profession of the country, as "derogatory to professional character" and "incompatible with honorable standing in the profession"—and, hence, are subject to penalty within the organization of the profession itself.

The penalty usually inflicted is ostracism—that is, the offender is refused membership in medical organizations—or, if already a member, he is expelled; and the punishment is of unlimited duration.

On the other hand, when physicians violate the public's standards of morality and thereby bring upon themselves public disrepute, their professional standing, nevertheless, may be safe from challenge in medical organizations. Such discrimination is neither creditable nor defensible.

It is admitted that there are exceptions to this rule and that, now and then, scandalous transgressions of the moral law by physicians, members of medical organizations, are dealt with by those organizations as they de-

serve; but such exceptions are mere errata determined by the impulse of the hour or the accident of the dominance of a particular influence at a particular meeting, and not by a well-known and well-sustained policy of upholding the honor and dignity of the profession.

Consider such offences as drunkenness, immorality, adultery, abandonment of family, theft, conspiracy to defraud, ribaldry, perjury, or other manifestations of depravity; how many of us have known medical organizations to notice them officially—or, indeed, any other transgressions of personal dignity or honor which were not directly related to the practice of medicine?

All the world knows that physicians are not disposed to condone such misconduct and that still less are they disposed to approve it; and yet it is clear that, collectively, they do not uphold the moral standards with the same degree of rigidity of spinal column as they exhibit, as individuals, in everyday life.

It is not admitted that gross misconduct is common on the part of physicians. Indeed, I know of no reason why the medical profession as a whole should evade comparison with the clerical profession as a whole in regard to such matters.

And yet transgressions of the most commonplace ideals of personal character are painfully familiar to us.

Who does not know of the disgraceful revellies indulged in on railroad trains monopolized by physicians on their way to meetings of the American Medical Association, and of drunkenness and ribaldry on the part of some—even some in high places, on occasions, during the progress of such meetings?

Verily it would appear that a physician may be a regular drunkard, or a regular vulgarian—and, yet, if he be quite proper in relation to technical observances, he may occupy an honorable position in the highest councils of the profession.

It seems quite plain that our moral ideals need expansion.

Obviously, the proper time to inculcate such ideals is during the years of student life. Medical teachers cannot evade respon-

sibility in this respect. Their influence in molding character by the silent influence of example may yield a richer harvest than all the technical information they impart.

In my view, the greatest service the late N. S. Davis rendered the medical profession was not by expounding and disseminating the facts of medical science, grandly though he did it; it was by furnishing an example of strong and blameless character, of noble precepts and noble practices—which has inspired many and many a pupil to strive without ceasing and without wearying for a career as near to that of the exemplar as the limitations and restraints of a smaller nature would allow. A grave sin of omission on the part of this Society has been its failure to do adequate honor to the most illustrious of its founders.

I had rather be a teacher and practitioner like that—able to look out upon the world with unflinching eye, than be president of the American Medical Association, but without the grace of a wholesome influence on my fellows.

And if it be true that the ideals of a large part of our fraternity may be favorably influenced by the example of a single man, what is to be said of the demoralizing effects on those ideals of examples of intemperance, vulgarity, dishonesty or sordidness of character on the part of medical teachers?

The clearest proof of the value of a teacher is that his pupils have wholesome ideals; and his greatest glory is in teaching but little that has to be forgotten, and in furnishing an example of personal fidelity and personal cleanliness that cannot be.

It is gladly admitted, however, that in no direction have professional ideals shown greater improvement of late years than in the administration of medical colleges. The indecencies of the lecture room indulged in, by even eminent teachers, twenty years ago would not be tolerated to-day by any respectable faculty or by any average class of medical students. Even the basis of competition between medical colleges has been greatly elevated. Formerly it was undisguised commercialism, carried, in some quarters, to the extent of employing drummers to proselyte

the disaffected students of neighboring colleges and in general characterized by maximum ease of graduation and maximum profits to the institution; but of late the basis of competition has been getting to be more and more sound educational standards, higher requirements, better facilities, and the greatest quantity and best quality of scientific and practical training. Verily the fountains of the medical profession are being purified—and we have no reason to be ashamed of those of our own State.

Our authoritative moral standards are furnished by the American Medical Association and represent the practically unanimous vote of the organized profession of the country. And if it were said that some of these standards were more honored in the breach than in the observance by a few of our number, we might answer that the same statement could be made with equal emphasis in relation to members of religious organizations—but yet insisting that, in each case, the overwhelming majority of both rank and file held true to their colors.

The original Code of Ethics of the Association is one of the grandest essays on morals that ever was written; and if some of its features have outlived their usefulness and new kinds of unprofessionalism have come into vogue which are not covered by its provisions, the composition as a whole must continue to serve as an inspiration to those who are looking for purity and dignity of professional ideals. I believe that the Code has done more for the medical fraternity of this country than all the scientific transactions of the Association combined.

It obligates us, everyone, as does the instrument that has taken its place, to uphold the honor and dignity of our profession; and this one command says everything that can be said about the foundations of a sound character—purity, honesty, fidelity to trust, unselfishness, generosity, courage, and helpfulness to others.

It tells us to do the best we are able, to-day, and to strive without ceasing to do better tomorrow; to maintain a stern, immobile front in the presence of vulgarity, ribaldry and intemperance; to be fair even to gener-

osity to our competing neighbor; to do as we would be done by for a struggling and overborne brother; to forgive as we would be forgiven: and to be known in life as we would be remembered after.

I know of no better way to uphold the honor and dignity of my profession than to uphold my own honor and dignity as a man.

The standing of that profession in popular esteem represents the average standing of its members. Some raise it, some lower it. What is that man doing who is going through life in ignorance of the resources of his art, and without effort to qualify himself for his work? What is he doing who is drunk, or among depraved companions, or in places of evil resort? Is he elevating or degrading his profession?

What is he doing who is polluting his title—and his soul—with secret crime, or has engulfed himself in the noisome mire of social scandal? What is he doing who is belittling and undermining his brother—or out of malice of heart stands in the way of that brother's effort to get into relations of harmony with the organizations of the profession?

Let us answer, each to his own conscience.

The instrument that has taken the place of the Code does not attempt to enforce its precepts; it merely announces them as "principles," and leaves each State and territorial society free to administer them in its own way. Such authority implies the need of machinery in each commonwealth, such as a code of rules to give practical effect to the "Principles;" and our State Society has none.

At present each of our county organizations interprets the "Principles" not only without the co-ordinating influence of a central authority, which would ensure uniformity of interpretation throughout the State, but without formulated rules of its own to serve as a safeguard against erraticism and inconstancy of policy.

These important problems, which are fundamental to professional unity, are being disposed of today in a haphazard manner, subject to the caprices and passions of the hour and to the prejudices of the little coterie that happens to be in power.

There is abundant reason for the opinion

that there are hundreds of physicians in our State, now ostracized and unable to secure admission to our State Society, because of the petty personal jealousies and spites which bar their admission to the tributary county organizations, but who, nevertheless, are fully deserving of honorable recognition. Under existing conditions such men have almost no redress. They are being forced, and in some instances by their inferiors, into hostility to the organized profession while eager and deserving to be a part of it.

In view of these considerations, I respectfully recommend that steps be taken at this meeting to prepare an Illinois State Code of Medical Ethics, based upon and in full accord with the Principles of Ethics of the American Medical Association.

Such a code should aim primarily at the harmonization and unification of the entire profession. It should be free from excesses of every kind. It should maintain high moral standards unrelentingly and with impartial favor, as between those of high degree and those of low degree; and it should have due regard for popular opinion in respect to such standards. Concerning wayward brethren, applying for recognition, it should exemplify the proposition that "Charity suffereth long and is kind." It should contemplate their transgressions with indulgence and regard every application for admission to a society as, at once, a plea for pardon, and a pledge of future loyalty; for no man seeks membership in an organization, and still less does he fight for it, without a genuine desire to have it, and a genuine intention to conform to its requirements. A life sentence of ostracism should never be inflicted for mere technical transgressions, nor for any others except such as constitute *prima facie* evidence of depravity of heart.

Such a code should be of an inspiring and uplifting kind; and inasmuch as any person of respectable appearance and behavior, whether he be an honorable doctor, a dishonorable doctor, or no doctor at all, is now welcome to attend the scientific meetings of our State Medical Society, but without participating in the proceedings, so should the code open the door of every constituent county

society to those who are in honest search of medical information.

If there is one concept more deeply rooted than another in the conscience of the profession, it is a sense of inviolable obligation of personal and professional fidelity to the sick. The doctor stands side by side with the minister and priest of God in point of readiness to override weariness of body, and even the certainty of personal danger to serve his fellowman; and this, not for the paltry dollar, but to honor the divinity that is within him—to glorify his calling and demonstrate his right to belong to it.

And yet there is a widespread suspicion that physicians are not above the crime of keeping people sick for purposes of gain.

I do not believe there is a physician on earth—and physicians are surely the most competent judges—who has ever known of such a case; and I do not hesitate to denounce the suspicion as the invention of a mind that is not, itself, unacquainted with ways that are dark.

Physicians err in diagnosis now and then—that is, young physicians do; and sometimes they are unsuccessful in staying the hand of death—for they are but men. But the glory of achievement is dearer to the doctor's heart than any prospect of pecuniary gain.

It must be admitted, however, that here and there a deceitful and mercenary nature is found holding out promises of cure in the case of a malady which he must know is incurable, and this in order to get money from the trusting sick; and then, when the inevitable end is in plain view, he maintains a show of honorable intention by deploring the misfortune of not having been called a little earlier.

It must also be admitted that now and then surgical operations are performed apparently with greater regard for the prospective fee than for that of the patient's welfare; but it is so obvious that a productive surgical reputation must include as its fundamental element the soundest professional integrity, we are forced to believe that examples of seeming sordidness and dishonor are, in most instan-

ces, at least, mere exhibitions of bad judgment by a sincere mind.

The acceptance by the family physician from a surgeon of a commission on the fee received for an operation on the physician's patient, or the proffering by the surgeon of a division of fee with the physician furnishing an operative case, is, to me, a comparatively new manifestation of paralysis of the moral sense.

I never could countenance the surreptitiousness and the suggestion of treachery to the patient with which such acts were done; while the ignominious attitude of the physician as the receiver of alms from the surgeon compelled angry denunciation. And yet when my acquaintance with the subject was superficial and I contrasted the emoluments and the comparative ease of life of the established surgeon with the unending drudgery and pitiful compensation of the average family physician, I could not help feeling that there was injustice somewhere, and that, inasmuch as the physician feeds the surgeon, the surgeon should make adequate return—not as a benevolence, or as a bribe, but as a matter of right, and in broad daylight, and with the full knowledge of the patient.

Now, however, I think it should not be done at all; for I have come to know of some of the intolerable abuses which are inseparable from such a policy—and I can think of others.

The physician should stand on his own feet. If he receives inadequate compensation, it is his own fault. But if the surgeon may charge, with unquestioned propriety, for the responsibility involved in the performance of an operation, I know of no reason why the physician who assumes the responsibility of deciding that the operation shall be done may not, with equal propriety, charge for that responsibility. The failure of operations undertaken on my advice has more than once done much greater injury to my reputation than it has to that of the operators, although possibly in one or two instances the failure may have been due to the operator's own shortcomings; and, consequently of late years, I have refused to admit that the surgeon is the only person deserving of consideration in

such matters. I, too, charge for responsibility.

To the honor of the surgeons, be it said, it was they who exposed and denounced the dangerous and unbecoming practice; and to the honor of the united medical profession of the country be it added, the practice is now universally condemned and, of course, abandoned by all self-respecting practitioners.

There is one of our ideals that seems to be quite beyond the capacity of appreciation of the world at large; it is the one which requires us to protect the public health without a penny of compensation. This is done by discovering the causes of epidemic and other infectious diseases and their modes of action—and thereafter preventing the accession of such causes to the people or rendering the people immune to their influence—and thus arresting the process of propagation.

Achievements in this direction, prevention, are among the greatest glories of the profession. I know of no other body of men on earth whose most serious and important business is the destruction of their own means of livelihood; and this physicians are doing as fast as they can—to the honor of their profession and the benefit of all mankind.

Allow me to refer to some of the activities of this kind on the part of the medical organizations of our own State at the present time:

There is the Tuberculosis Committee organized in 1903, and headed by Klebs, Evans, Billings, Alice Hamilton, Webster, Robison, and others, which has done a stupendous amount of work among the tuberculous poor of Chicago, without charge, and maintained a crusade of education of the public in regard to the modes of propagation and prevention of the disease, through the agency of lectures delivered at schools, social settlements, community centers and before clubs, labor organizations—and, indeed, wherever an opening could be found.

In like manner the Chicago Medical Society has been maintaining, since last fall, a course of weekly free lectures for the instruction of the masses in matters pertaining to the protection of the individual and the public health.

Similarly, our own State Medical Society

has furnished lecturers and will continue to do so, let us hope, to Chautauqua Assemblies, clubs and societies, and other gatherings of people in various parts of the State, who have expounded problems of vital interest to the well-being of the individual, and to that of our great commonwealth.

Then contemplate the self-sacrificing labors of the chairman of the Tuberculosis Committee of this Society, J. W. Pettit, in establishing and maintaining a tuberculosis camp near Ottawa—not only without a penny of profit to himself, but at a pecuniary loss, in order to prove, as he has proved, that tuberculosis in its early stage, can be cured on our own soil about as readily as it can be done elsewhere—and all this in order that the organized profession of the State might have a solid foundation for an application to the legislature to establish and maintain at public expense, sanatoria in various parts of the State, primarily, for the humane care of the tuberculous poor, and, secondarily, to prevent them from conveying the disease to other persons. It is estimated that this self-sacrificing work, so auspiciously begun, will, if continued with intelligence year after year, in the course of a single decade effect a saving to the State of four thousand to six thousand human lives annually, to say nothing of the prevention of an incalculable amount of human misery and woe. And this is being done gratuitously.

In the same connection I cannot refrain from acknowledging the devoted and efficient services of the President and Secretary of our State Board of Health, and the State Association for the Prevention of Tuberculosis in co-operating with the committee of this Society in the labors of the year. Indeed, without that co-operation the committee could have accomplished but little beyond the maintenance of the tuberculosis camp and the education of a small part of the population of the State.

The most brilliant and beneficent service of this kind in the history of the western hemisphere is that rendered by the late Dr. Walter Reed and his associates in discovering the modes of the propagation and prevention of yellow fever—the most virulent and de-

structive of our indigenous pestilences. For a hundred and fifty years it has been carried almost annually from its breeding places in the West Indies into our own country and to foreign lands, and often with the effect of starting devastating epidemics. In the year 1878 the financial loss occasioned by its prevalence in the Mississippi Valley exceeded fifteen million dollars—to say nothing of the appalling loss of life. On more than one occasion it has brought disaster to military expeditions. During the French campaign in Hayti in 1802 it destroyed in a single season 22,000 soldiers out of an army of 25,000; and the persistent attempts of Spain to subjugate Cuba were frustrated by its deadliness.

But when the United States army took possession of the Spanish Islands, its medical officers appointed a commission of four physicians, headed by Dr. Walter Reed, to investigate the cause of the fever and to institute measures to limit its spread.

Two of the number contracted the malady, and one died of it.

The commission discovered that it was propagated by mosquitoes of a particular variety (*stegomyia fasciata*), which sucked the poisoned blood of the fever patients into their own bodies and after it had been elaborated in their bodies for twelve or more days they injected it into the bodies of other susceptible human beings and gave them the disease.

The process of prevention consists of destroying the breeding places of the insects and the insects themselves, and of enclosing the fever patients in an impenetrable netting so as to make it impossible for mosquitoes to convey the infection from them to other persons.

Think of the results—accomplished and prospective. Not a single case of yellow fever has originated in Havana—the hot-bed of the pestilence—since 1901. Compute the annual saving of life and treasure. Estimate the time it will take to make yellow fever a mere item of history; and then remember that the beneficent results of the labors of that little commission will continue as long as the human race endures. I salute the dead and

make obeisance to the living in token of my pride and reverence; may their names and services be embalmed in the history of medicine and serve as an inspiration to their successors forever and forevermore.

But such achievements are far beyond the reach of popular appreciation. They are not regarded in our country as proof of greatness or as the basis of a valid claim for national gratitude and honor.

Halls of fame may not be made small and common by using them to perpetuate the memory of the victories of medical science. They are made for poets and novelists, painters and sculptors, musicians and educators, soldiers and statesmen. But who among you will say that the work of Dr. Walter Reed does not represent a greater wealth of service to mankind than has been rendered by all the poets and novelists and sculptors and painters that have ever lived?

When I think of the exalted and unfailing fidelity to the public weal that has characterized the attitude of the medical profession from the earliest periods of authentic history to the present time; and when I remember that on every occasion of epidemics of pestilence which have devastated the earth, physicians were always found at their posts of duty, nor thought it sacrifice to die in the service of their fellowmen, I feel ashamed of mentioning their wee small faults which, after all, are but manifestations of the imperfections of character common to all mankind.

I have read of the defense of Thermopylae; of the Light Brigade at Balaklava; of the Old Guard at Waterloo.

I have heard of the Rock of Chickamauga; of the splendor of Pickett's charge at Gettysburg; and of all the fierce glory of the Heights of San Juan.

A vision of contending armies comes before me now. I see the serried columns gathering for assault. I hear the thundering of cannon, the roar of musketry, the swish of sabre, the high-pitched song of searching bullet. I see rivers of blood and horrors of mutilation. I hear the yells of challenge and defiance, the

shrieks of agony, the curses of hate and the sickening gasps of expiring life.

I see the rushing, charging columns halt; they waver, they recoil;—but there! impelled by a resistless impulse to do or die, they dash on and on with gathering fury and remorseless vengeance, till they reach and scale the enemy's ramparts, now slippery with blood, while screams of fierce triumph are mingled with the wails of faintness and despair, and angels look pitying on.

And we laugh and ery in gladness o'er the glories of that day!

Aye, adulation to the living, immortality to the mangled dead, and tears for the desolate homes of widows and orphans.

Well may a grateful country commemorate such deeds in statues of bronze and shafts of granite. Well may it set apart a day in every year to decorate the graves of the fallen and from the story of their devotion and sacrifice derive ennobling inspiration for generations yet unborn.

But do you not know that again and again, and yet again, more lives have been lost in a single epidemic of cholera than have been destroyed in all the battles and in all the deeds of violence and in all the accidents by sea and by land of a century?

When the breath of pestilence withers a continent and with swift unsparing malignancy decimates a nation: It is then that brave men, who, in the shock of battle, can defy death or in the defense of their homes 'gainst mortal foe can die with a smile upon their lips, turn sick and weak with fear and flee to places of fancied security.

When the whirl of machinery is stilled and the avenues of commerce are deserted; when the palaces of trade are locked and barred and boarded and abandoned; when theology has been supplanted by a religion of personal service and places of amusement are regarded with aversion or disgust; when laughter is lost and forgotten and the very air is instinct with desolation and despair; when there are not enough well to nurse the sick and not enough living to bury the dead; even then has the remnant of the medical profession been found moving shoulder to shoulder with the thoughts and impulses of a single man on

errands of Christ-kissed purpose and heroic endeavor.

No thought of courage there. No sounding words of praise or gratitude. No line on printed page to note a hero's death, nor flower nor stone to mark his final resting-place. The danger over, the service is forgotten, and the doctor's neglected clay crumbles to dust unhonored and unsung, while the world goes on laughing and weeping as before.

But there, away off beyond the expanse of the starlit sky, where faithful spirits all are wafted and do find repose—where records of motives are kept as well as of deeds—of noble efforts and sacrifices as well as of human frailties—there is his monument more enduring than any of earth's treasures in bronze or marble, for his story is written in the book of God.

WHAT WE MUST LEARN AND UN- LEARN IN THE TREATMENT OF TUBERCULOSIS.

J. W. PETTIT, M. D., OTTAWA.

During the past twenty years there has been a steady development of confidence in the open air method of treating pulmonary tuberculosis. The wonderful success which has attended this method of treatment in all countries irrespective of temperature, altitude, dryness, humidity or other special climatic conditions has demonstrated its immense value as a curative agency. We have passed through the period of skepticism and have entered upon an era of enthusiasm and activity. This makes it necessary for us to adjust our ideas and methods to the new order of things.

The anti-tuberculous movement which is now sweeping over the civilized world is destined to do much good by creating an interest in a subject which has hitherto been treated most indifferently. But a movement of this kind to be of lasting benefit must have a more substantial basis than mere enthusiasm and activity. If our efforts are not based upon the tangible foundation of results the movement so successfully begun "will vanish like a castle in the air." This should not, and will

not be the result if we keep in mind that the successful application of a therapeutic principle depends quite as much upon correct methods as upon the correctness of the principle itself. We have much to unlearn, as well as to learn in the modern treatment of tuberculosis, if we would save it from falling into the undeserved disrepute which must follow the present indifference to methods, and should exercise more care in holding out the inducement that the range of its application is wider than is warranted by the facts of experience. Now is the time to get our bearings if we would avoid the pitfalls to which a wrong beginning inevitably leads.

It is not my purpose in the present address to attempt to cover the whole subject of the treatment of tuberculosis, but rather to call especial attention to those features of the problem which are either ignored, misunderstood or not sufficiently emphasized.

First as to climate.—It is now a well established fact that climate is an unimportant factor in the treatment of tuberculosis. It cannot be gainsaid that treatment can be conducted in certain climates more comfortably than in others, but tuberculosis can be cured in all climates. The beneficial results which have been derived from certain supposedly favorable climates are not due to atmospheric conditions, but simply to the fact that patients frequenting these places have lived out of doors. We now know that it is life in the open air, and not some peculiar attributes of climate which can only be found in certain favored localities. The abuse of climatic treatment can only be excused on the plea that no other method was known that promised relief. Patients have been indiscriminately sent to California, Colorado, Arizona and New Mexico, with only a vague idea as to what they should do when they got there. The result has been that these supposedly favored localities have been filled with a horde of pitiful wrecks of humanity who should never have been allowed, much less encouraged by their physicians, to leave their homes.

Because the medical fraternity have learned the utter futility of drugs in the treatment of tuberculosis, our responsibility

has not ceased. We must guide our patients where we do not treat them. We should not attempt to advise a change of climate, or the adoption of a given course of treatment until we are in full possession of such facts as will enable us to guide our patients aright. We have not discharged our duty when we have told him drugs are of no avail and leave him to his own resources, or, as is usually the case, tell him to go west. Such advice generally means to the person of slender purse that after a long and expensive journey he finds himself forced to contribute to his own support when work of any kind is contra-indicated. He finds himself condemned to board at cheap restaurants, and to live in cheap lodging houses where he is still further exposed to infection. Add to these discouragements, the inevitable homesickness, worry, loneliness, lack of medical direction and of what possible avail can climate be under such circumstances? This is the picture presented by that great army of consumptives whom we have been indiscriminately sending west. A prominent charity worker has investigated the conditions in several typical health-seekers towns, and as a result calls on the medical profession throughout the country to do all it can to prevent the "inexcusable stupidity which sends these people hither to die, friendless and alone." He states that in Phoenix, Arizona, twenty-five per cent of the population are health seekers, and of this number four-fifths should never have been allowed to leave home. The hospitals, sanatoria and poor houses are filled with dying consumptives. Public and private charity is taxed to the uttermost, and still cannot meet the demands made upon them. No wonder these localities are seriously considering the question of legislating against us. We have no moral right to burden them with the care of our consumptives. Fortunately the discovery that these patients can be safely treated at home comes at a time when they can be forced back upon us, not only without detriment, but to their great advantage. It has been demonstrated that tuberculosis can be cured in Illinois. It is also a well established fact that where patients recover they must ever afterwards continue to live under sub-

stantially the same climatic conditions as those under which the cure is effected. It is a matter of common experience, so common that there are few exceptions to the rule, that patients cured in the more favorable climates relapse on their return to this climate.

We have also made a mistake in regarding fresh air as the *sine qua non* in the treatment of tuberculosis. Nutritious food, regulated rest and exercise are each of essential importance. Highly nutritious and properly regulated diet is, if any difference, even more essential than fresh air. This fact is not generally recognized, and where it is, is not sufficiently emphasized. It will not do to leave the patient to his own discretion in anything, and especially in the matter of diet. This must be selected for him and precautions taken that the patient shall not eat such food as a capricious appetite will almost certainly lead him to select. Since the whole question is one of nutrition it is essential that the patient be fed, not what his appetite may suggest, but a balanced ration which contains from day to day all the elements of nutrition of which he so much stands in need. In order to accomplish this the one who prepares his food should have a scientific knowledge of food values. This leads me to suggest that domestic science as taught in many of our technical schools should occupy a conspicuous place in the treatment of this disease.

In the housing of tuberculosis patients we have yet much to learn. It was natural that sanatoria for the treatment of tuberculosis should at first copy the usual methods of hospital construction, hence there has risen a too expensive ideal. Our aim should be to supply the maximum amount of pure air at a minimum expense. In favorable climates the tent has been largely and successfully used. At first thought it may seem incredible that patients can be comfortably housed in a tent at a temperature twenty-five degrees below zero. Yet this is just what the patients at the Ottawa Tent Colony have done during the past winter, one of the most severe we have experienced in the northwest for many years.

Inasmuch as no systematic attempt had ever been made to treat tuberculosis in Illi-

nois by modern methods the State Medical Society established a Tent Colony at Ottawa to demonstrate that this disease can be as successfully treated here as elsewhere. The demonstration was only intended to cover a period of a few months, hence it was desirable that the equipment be inexpensive. To this end the tent was adopted. It was not believed at the time that this method would be feasible in cold weather or would be accepted by the patients even if it were; therefore a large building was secured where they could be housed during the winter. It was expected that as cold weather came on, patients would move into this building at their pleasure. In order to keep them out as long as possible each tent was supplied with an oil stove, which was expected to supply only sufficient warmth for chilly, or moderately cold weather. It was anticipated that as the weather grew colder the patients would go indoors. But they did not; even the most delicate women remaining in their tents. Instead of suffering from the cold they were comfortable and rather enjoyed the experience. Several of those who were accustomed to living in frame houses declared they would have been less comfortable had they been at home. Even new arrivals during the extremely cold weather insisted upon going into tents. Their action is the more remarkable when we take into account that many, if not most of them, had come from homes where it was difficult to drive them away from the vitiated and super-heated atmosphere of badly ventilated houses.

Since it has been demonstrated that the tent is practicable in cold climates it should be used more extensively. It fulfils the conditions most perfectly from a scientific standpoint. From an economic standpoint the tent commends itself. It costs from four to five hundred dollars to house a patient in an ordinary building according to the plan usually followed in hospital construction. A tent with necessary furnishings need not cost more than one-tenth this sum. To be consistent we must keep our patients out of doors, not part of the time, but all the time. In no other way can this be done so easily and satisfactorily as in a tent. It is as irrational as it is

expensive to house tuberculous patients in substantial buildings. The experience at the Ottawa Tent Colony proves conclusively that the use of the tent in the treatment of tuberculosis is applicable in any climate.

Any method by which the patient can be induced to spend the most time out doors is to be warmly commended. There is a general impression that with the doors and windows open they enjoy all the advantages of proper ventilation, but this is not correct. By far the best way is to have the patient live in a tent where he can have all the comforts of the home and be practically out of doors the year round. Tent life when governed by well selected rules, becomes thoroughly enjoyable and patients who at first have exaggerated ideas of its inconveniences, become loath to leave it.

Another practical point and one which is essential to success, is the importance of an early diagnosis. The profession must awaken to a realization of the fact that if the disease is not diagnosed until it is well advanced, as is now too often the case, the time when a cure could have been effected may have passed. Many a patient's life is sacrificed because a diagnosis is not made early enough for him to avail himself of the advantages of treatment. The curability of tuberculosis is well established. Scepticism upon this subject must go down before ocular demonstration. It must be understood, however, that a cure depends upon an early diagnosis. Since it is a wasting disease, it is self evident that the earlier a diagnosis is made the more certainly can a cure be effected. While it is true that patients in all stages of the disease may be cured, it is equally true that the chances for recovery diminish very rapidly as the disease progresses. As physicians we should be on the alert to recognize the disease early, and if after the most painstaking efforts we fail to make a diagnosis and still have reason to suspect it, we should give the patient and not the disease the benefit of the doubt by promptly placing him under treatment. The experience at the Ottawa Tent Colony thus far has been that one-third of the patients sent to us for treatment have been too far advanced to secure permanent

results. Many of the advanced cases have improved, but it is doubtful if this improvement will be permanent. Every incipient case has improved rapidly, and as we believe permanently. It must be understood and cannot be too strongly emphasized that when we announce to the world that tuberculosis can be cured, that to insure success the treatment must be begun in the early stages of the disease. When the disease has advanced to that stage where it is apparent to the most casual observer that the person has tuberculosis it may be too late to effect a cure. I dwell upon this point at considerable length for the reason that the public jumped to the conclusion that tuberculosis can be cured in all stages and that all that is necessary to insure a cure is for a patient to enter a sanatorium, submit to treatment and favorable results will certainly follow. This misconception will inevitably lead to disappointment and the failures, which follow such a course will result in discrediting the treatment. Let it be distinctly understood that the modern treatment of tuberculosis is not a cure all, but that fully eighty or ninety per cent of incipient cases can be cured if the treatment is begun early and properly carried out. Few propositions in medicine are more inviting than the treatment of an incipient case of tuberculosis. Few more discouraging after the disease is well advanced. The important duty of medical men is to familiarize themselves with the first symptoms of the disease in order that they may recognize it early and promptly place their patients under treatment. Such a course not only insures a larger percentage of cures, but shortens the time and lessens the expense, thus bringing relief to that large number to whom this difference in time and money frequently means life or death.

"In the warfare against tuberculosis the man behind the gun is the general practitioner. The battle cannot be won unless he takes an active, aggressive, accurate part. That he is not always alert must be attributed in part to the carelessness which a routine life readily engenders, and partly to a failure to grasp the situation in individual cases. The two points to be impressed upon him are

first, that an early recognition of the disease can only come from better methods of practice and greater attention to the art of diagnosis. The insidiousness of the onset, the protean modes of advance, and the masked features of even serious cases should never be forgotten." (Osler.)

Upon the family physician rests this responsibility. He must accept it whether he will or not. Fortunately the difficulties of the situation are not very great. A full recognition of our duty is the real obstacle to overcome.

We must also recognize the limitations of the modern treatment of tuberculosis, and be more careful in sending patients to sanatoria for treatment. While it is true that many advanced cases are benefitted and some are cured, the difficulties attending the treatment of such cases in time, expense, etc., makes the results very uncertain and unsatisfactory. Every patient who returns from a sanatorium will aid or injure the cause in proportion to the extent to which he has been benefitted. This makes it necessary that we should be careful in the selection of patients for treatment, especially just at present when public confidence is not firmly established.

We must also be cautious in estimating a cure. Tuberculosis is not only insidious in its approach, but deceptive in its appearance of recovery. In most diseases normal weight, temperature, pulse, appetite, muscular development, buoyancy of spirits, etc., may safely be regarded as evidences of a return to health. This, however, is not true of consumption. This fact not only leads to a misunderstanding of what constitutes a cure but makes the tuberculous patient when he becomes convalescent very difficult to control. There are two crises in the history of every patient. The first is to induce him to accept the treatment. This usually is not difficult. The second crisis is when he becomes convalescent. One of the greatest difficulties is to induce patients to continue treatment long enough to receive permanent benefit. Patients who make the most decided improvement are the most difficult to retain. The patient who improves rapidly is soon restored to his normal weight and feels perfectly well, can see

no reason for remaining in a sanatorium where so far as he can judge the treatment is so simple he could carry it out at home. He cannot distinguish between his feelings and his actual condition, becomes impatient of restraint and notwithstanding the earnest entreaties and warnings of his medical adviser discontinues treatment just when recovery is assured but not yet complete. Next to inability to cure the advanced cases the failure to hold the curable is the most discouraging.

This treatment is on trial before the public. It will be judged by its permanent results. Every patient who makes substantial improvement, but abandons treatment before he is fully recovered, returns to his home proclaiming that he is cured, and relapses, will be cited as a failure. The public may not know that the failure is not due to the treatment, but to the perversity of the patient, who insists he is well simply because he looks and feels well. Care on the part of physicians who recommend the treatment will tend to obviate this unfortunate contingency.

The characteristic optimism of the tuberculous patient, while in some respects advantageous, has a decided tendency to lure him to his own destruction. Many a patient for a time makes a good fight, but on account of over-confidence when he becomes convalescent, what was an assured victory is turned to a sudden defeat. "When really ill he is brave. When the battle is almost won, he is brave no longer." This is a very practical phase of the problem which must be ignored.

There is a prevailing impression that because the treatment consists of the use of such commonplace and familiar agencies as fresh air, nutritious food and rest or exercise that it is easy of application. The treatment is neither simple nor easy. While the agencies used to effect a cure are familiar they require skill in their application on the part of the physician, and courage, persistence and intelligent co-operation on the part of the patient. Little or no medicine is necessary. This fact however, does not eliminate the physician. His services are just as essential as in the treatment of any other disease. It is not

medical *treatment* as ordinarily understood that is required, but medical *supervision*.

A word of caution with regard to home treatment. Since the agencies are so simple, it would seem there would be no difficulty in carrying out the treatment at home. Experience teaches that as a rule it cannot. First, because so many cases occur in families where it is not possible to make the application. Second, where patients are more favorably situated it is impracticable for the reason that the treatment has not been accepted by the laity with that degree of confidence so essential to its application. A third reason may be given that the methods are not well understood by the average physician, and where they are they consume so much time and energy that it is hardly possible for the busy physician to get the time from his other work to devote to the few patients whom he may have under his care. In other words it is practical rather than theoretical reasons why the treatment cannot be applied at home. The time may and probably will come when this can be done, but not until the principles of treatment are universally accepted and the methods familiar to all. The education of the public and profession must come through sanatoria. These will be training schools which will be centers of influence in propagating the new doctrine, and its methods; therefore it will be wise for us to devote our energies for the present at least, to the establishment of sanatoria, rather than take the risk of bringing the treatment into disrepute by the many failures which must result through lack of experience on the part of physicians, patients and friends. The conditions seem to be analogous to the boy who attempts to secure an education at home, surrounded by the distractions of home life. He can do it if he has more than the usual amount of persistence and is not too easily discouraged. In other words, the exceptional person may secure an education in this way, but the rule is that those who attempt it will fail. So it is with the attempt to cure tuberculosis at the patient's home and for substantially the same reasons. The difficulty lies in the fact that in either case the other members of the family must conform to the life

of the student or patient, a thing rarely ever practicable and frequently not even possible. Even were it possible to so order the affairs of the family as to conform to the interests of the patient he would still lack the moral support of others afflicted as he is. The soldier who can touch elbows with his comrades is braver and more efficient than the lone sentinel who is left to fight alone.

The success of the modern treatment of tuberculosis does not depend altogether upon what can be done, but what patients will accept. It is not enough to place before these patients an opportunity to get well. They must accept what is offered. Otherwise it is useless. Many of them are apathetic, most of them whimsical and impatient of restraint. This makes the task of carrying out a long course of treatment always difficult and too frequently disappointing. This may be assigned as an additional reason why home treatment will so frequently fail under present conditions. Cornet has summarized this whole question in the statement that, "Without the co-operation of the patient the physician can do nothing." This makes it necessary to inform him that he has tuberculosis.

It is a mistaken kindness to withhold from a patient the true nature of his condition. It is not possible to properly treat him unless he is aware of the nature and gravity of his disease. Rules made for his guidance will not be obeyed unless he knows what is the matter with him, and that their violation will be followed by disastrous results. No harm can come from telling a patient that he has tuberculosis, and explaining to him that it means a persistent, continuous struggle for his existence for a term of years. He will soon recognize that his welfare depends largely upon his own efforts and will become a good patient, where otherwise he would be but an indifferent one. Unless he understands this fully, as soon as he begins to improve he is likely to stop treatment, thereby greatly lessening his chances of recovery. Unremitting attention is demanded of both patient and physician as to the mode of life to be followed in these cases. It is easily possible for a patient unwittingly to do himself

more damage in one day than can be repaired in a month. We should impress upon these patients the seriousness of their condition; the almost certain destruction that awaits them, if they do not intelligently and persistently cope with the grim destroyer; that the open air and dietetic treatment is the only method known to medical science by which consumption can be cured; that under present conditions the only place where this can be done with any degree of certainty is in sanatoria, and there only by remaining several months; that to take the treatment of his case in his own hands is to invite almost certain disaster; that the treatment is neither simple nor easy; that courage and fortitude are quite as essential as fresh air and good food. If these suggestions are complied with, the patient will enter upon the treatment with a full understanding of what is expected of him and the battle is more than half won when it is only just begun. We must fully impress him with the fact that consumption is a chronic disease and that the time required even in the incipient stage will severely tax the courage, patience and purse of the average individual.

While the difficulties in the application of the modern treatment of tuberculosis are many, there is nothing in the situation to discourage even the faint hearted. A few years ago we stood face to face with this terrible scourge, hopeless and helpless. To-day we know the cause of tuberculosis and how to cure it. The future is bright with hope. All that is needed now to triumph over the "great white plague" is an intelligent and painstaking application of well established scientific principles.

HIGH FREQUENCY IN INSOMNIA.

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Insomnia is a result more of city than of country life and it seems to be ever increasing. I fancy it is a trouble with which our forefathers were little acquainted, but in the present day with the rush and bustle in the

daily life of the professional man, of the merchant, the student and the "society lady" we, as doctors, are frequently called upon to prescribe for sleeplessness. Now, I have no hesitation in saying, after over 20 years of general practice, that, quite without the use of drugs, we have at our hand a most excellent means, not only of calming the nerves of our overtaxed patients, but also of giving them a refreshing and dreamless sleep. I refer to the use of High Frequency Currents. It is not to be supposed that electricity immediately after a single application is competent to produce a ready and prolonged sleep as we are accustomed to experience after sulphonal, trional and other hypnotics have been administered, nor can we hope for electricity to obliterate pain as we know that opium and its preparations are capable of doing, but after abundant use of High Frequency Currents during a period of nearly three years, I have every confidence in asserting that following a course of treatment varying from twelve to fifty applications, it is possible to give relief emphatically and permanently to a sufferer from sleeplessness. Further, though we lack in electricity the immediate benefit which follows the administration of one of the ordinary hypnotics, yet by way of compensation we can produce sleep without any deleterious effects. It is well known that hypnotics to produce habitual sleep have to be continually prescribed, sometimes in increasing doses, and further that no hypnotic can be taken for any length of time without giving rise to unpleasant consequences. By electricity on the other hand, the sleep that is produced resembles that of childhood, and it is unaccompanied by any headache, disturbance of digestion, constipation or nervousness, all of which symptoms we are accustomed to meet with in those for whom the usual sleep-producing drugs have been prescribed. The sleep which electricity gives rise to is not only sound but decidedly refreshing, and still further, not only do the High Frequency Currents induce sleep, but as we who employ this form of electricity are well aware, they improve the tone of the system to such an extent that our

patients are better fitted to resist and to overcome the evil influence of professional, business, educational or domestic cares and anxieties.

The explanation of the influence of High Frequency Currents in producing sleep in the human subject I am not prepared to state, indeed I question if any of us can give a satisfactory reason how these currents exercise their hypnotic properties. Still, when we remember that the High Frequency Currents act on the vaso-motor system and give rise by inhibition to dilatation of the blood vessels throughout the body, a condition clearly manifested in the sensation of warmth experienced for several hours in the extremities and on the surface of the body generally, one is led to conclude that a corresponding anæmia of brain is caused which may produce sleep.

I may now refer to my own experience in the treatment of insomnia. While comparatively few patients have sought my assistance suffering purely from sleeplessness, a great many who have come to me for treatment for various diseases have mentioned that sleeplessness was a prominent feature of their case. I think I may safely say that in three cases only have I met with complete failure; all the others have benefitted to a greater or less degree. Though in the earlier part of this paper I contrasted the suddenness of the effect of a dose of trional with electricity in respect to the prompt action of the drug, yet I am frequently told by patients who present themselves for High Frequency treatment suffering from various ailments, that after the first visit they have been so overcome with sleep that they have had to lie down for one or two hours in the afternoon. The more severe cases of insomnia, however, do not as a rule respond till they have had about three weeks daily treatment. One explanation I may give why I failed in the cases above referred to. At that time I possessed an apparatus which was capable of giving an output of only 300 milliamperes. Since I have employed M. Gaiffe's new high frequency installation with which

I can obtain a greatly increased output, much better results have been attained.

By way of illustrating what I have already said, let me offer you a few notes of four cases. The first of these is myself. Three years ago I suffered considerably from sleeplessness, and even during my summer holiday I awoke so early in the morning that I was in the habit in order to overcome my restlessness, of going out fishing even before the early worm had appeared, nor could I obtain the usual afternoon nap that one enjoys in holiday time, after an early dinner. No sooner, however, did I commence dealing with the High Frequency Currents in September than sleep returned to me, and I learned to fully appreciate, possibly for the first time, the blessing of a good night's rest. Since then sleep and I are well acquainted; indeed the union is now so profound that the night bell has ceased to disturb it, and I rise in the morning thoroughly refreshed.

The second case is that of a medical friend who has kindly furnished me with notes of his case, and these by his permission I now give you.

"From the middle of July last year until well on into January of the present one, it was my misfortune to be subjected to certain very painful experiences which caused me acute mental distress and so haunted my thought that it was with great difficulty that I attended to my professional work. By the beginning of September I was troubled with insomnia. I almost invariably lay awake until 5 or 5:30 a. m., when I fell into a troubled dose from which I awoke at 6, 6:30 or at latest 7 a. m.

In spite of this state of matters I would not take any hypnotic; and I consequently began to feel very exhausted and unfit for work. A crisis however was reached in January of this year when for more than seventy consecutive hours I was unable to get sleep for even a single minute. At the end of that period I felt as though my reason would give way, and it was with almost superhuman effort that I compelled myself to go through the routine of my daily duties. In addition to this feeling of exhaustion I

had a severe pain in the vertical region of the head, and it was with difficulty that I could concentrate my thoughts upon any subject. I well remember that it was on the third day after the insomnia had become absolute that I happened to meet you and to mention to you the deplorable condition in which I found myself. You urged me to try the effect of the electrical treatment and to this course I gladly consented. That same day I had my first seance. I had then made up my mind to use trional, but at your request abstained from taking any hypnotic whatsoever. On the night after my first sitting, I slept for about half an hour, and felt a distinct diminution in the nervous tension from which I suffered. The sittings were continued daily for a time. On the second night I slept for over an hour. By the third night I had three hours sleep, and the agonizing vertical pain had practically disappeared. Very rapidly my period of sleep became extended until at the end of a week or ten days I was able to get every night from six to seven hours of refreshing sleep.

Besides the return of sleep, however, I experienced a feeling of well-being that was indescribably enjoyable; and my capacity for, and enjoyment in, my work returned to the fullest extent. Altogether I had some thirty sittings, and from the third or fourth of these up till now (five weeks since they were discontinued) I have slept soundly and have been in excellent health and mentally vigorous. On one occasion about ten days ago I had a sleepless night, but a special circumstance was to my mind accountable for the occurrence, and I have had no return of the condition.

"Post hoc, propter hoc," is a conclusion to which we are often very apt to come in error; but I am convinced that in my case the connection between the treatment and the improved condition (I should rather say the absolutely cured condition) is too marked to allow of any doubt as to the effect being the result of the only cause. I cannot be too grateful for the benefit I have received at your hands."

The third case is that of a lady 40 years

of age, the widow of a doctor. She was sent to me by Dr. Alex Thompson of Glasgow in September, 1904, suffering from Alopecia Areata of three months' duration. She was a very nervous lady and suffered from pronounced insomnia which was only overcome by means of very frequent doses of bromide of potassium. I may mention in passing that after receiving about 50 applications of High Frequency, both generally and locally, the Alopecia was found to have disappeared and strong hair, which however, at first was pure white, was noticed growing from the bald patches. Since then the new hair is becoming black, like the rest of the hair. But what I wish now particularly to note is that the insomnia to which she was such a martyr has completely gone. I met her a fortnight ago, four months after treatment was discontinued, when I was delighted to learn that notwithstanding bereavement and domestic troubles, she was still enjoying excellent sleep at nights.

A fourth case I may now describe to you which illustrates the value of the combining Weir-Mitchell treatment including isolation, feeding and massage with High Frequency.

The patient, a married lady of about 40 years of age, was sent to me by Dr. Crawford Renton in August, 1904. Ten years ago she began to suffer from sleeplessness, produced, as she told me by "boredom." She was unfortunately at that time advised to try the effects of stimulants which produced such disastrous results that she had to undergo a special course of treatment. For a period of three years she kept all right, but on the return of her insomnia she was again led to seek consolation in stimulants. The state of the lady now became worse than ever. Her intemperance developed to such an extent that for a period of two years previous to my seeing her she was in the habit of imbibing 24 oz. of whisky daily. The statement is almost incredible, and indeed perhaps it would be wise to accept it with a reservation. At any rate she was brought to my nursing home in a condition of collapse bordering on coma; the heart's action was feeble and irregular; digestion was seriously impaired

and altogether she was a miserable wreck. The greatest care and attention were required and a nurse was constantly in attendance lest the acute depression from which she suffered might give rise to unpleasant results. Strychnine was administered hypodermically at suitable intervals both during the day and at night. Stimulants had at first to be permitted but they were very rapidly diminished, and for a night or two trional had to be administered. The heart's action was so irregular and feeble that it was not deemed advisable at first to permit the patient to come down stairs for electrical treatment, but on the fifth day after admission electrical treatment was commenced and the trional was discontinued. The High Frequency Currents had an almost immediate effect in producing sleep, and each morning the patient awakened much more refreshed than she had been accustomed to do after her dose of trional. As the pulse soon began to improve the strychnine was discontinued on the ninth day after admission, and meanwhile abundant nourishment was administered. Progress from this time was uninterrupted; the feeble state of the muscular system was immensely improved by means of suitable medical exercises and the general health was maintained by giving her occasional drives in an open carriage and afterwards making her take daily walking exercise out of doors. After in all a month's treatment the patient was dismissed having gained a stone in weight and having acquired the habit of sleeping all night through. The desire for stimulants no longer pressed upon her; her pulse had resumed its proper vigor and tone and she left the "Home" a different woman both morally and physically. During the past winter I have received the gratifying intelligence from her husband that this lady maintains the good position produced by the treatment, so that the cure gives promise of being lasting and even permanent.

I would again like to draw attention to this case as illustrating the great importance of a combination of beneficial influences where the nervous system gives evidence of being seriously impaired. The good result

exhibited by the case was due to the association of High Frequency Currents with the influence of the Weir-Mitchell discipline and this accords with other experiences of the same order. I should like to emphasize the point that the joint employment of these therapeutic agencies has a value in excess of what may be claimed either for one or the other taken separately.

It is unnecessary I think to adduce further instances to strengthen my statement that in the High Frequency Currents we have an agent which is capable of producing sleep in its most refreshing form and is effective in counteracting the ravages that are occasioned by intemperance whether in work, in study, in gaiety or in stimulants.

Before concluding this paper I should add that the method of treatment which I usually adopt in cases of insomnia is chiefly that of the condenser couch, and I find that much better results are obtained when in the case of adult females a minimum of 200 milliamperes and a maximum of 700 are passed through the patient. In the case of men I commence with 400 and rise to 850 milliamperes. I have never yet seen any evil effects from these large doses either in men or women, but the dose is always increased gradually. Occasionally the brush effleuré is employed over the head and back, and in obstinate cases I have found benefit from massaging directly over the back, the patient being connected with one of the terminals, while the current from the other terminal passes through the operator. This may be varied by laying the hand and forearm on the patient's back from the nape of the neck downwards over the spine. In this direct form of massage about 400 milliamperes may conveniently be employed. Used in this fashion I can confidently commend to my confreres the application of the High Frequency Currents as a valuable agent in the relief and permanent cure of insomnia.

Baker Inspects Lands.

Taylorville, Ill., May 25.—Dr. Baker of Jacksonville today purchased 415 acres of land in Bear Creek township for \$110 per acre, the total consideration being \$41,915.00.

THE SURGICAL TREATMENT OF LACERATIONS OF THE CERVIX UTERI.

BY GEO. C. WAISS, M. D., CHICAGO.

The surgical treatment of lacerations of the cervix is a comparatively modern procedure. We find that Aethius, who flourished at Alexandria in the sixth century after Christ, spent a large portion of his life collecting the medical writings of others that were stored in the famous library of that city. He speaks of the use of the speculum, describes minutely the use of the sponge tent and intra-uterine medication, mentioning the use of ointments, intra-uterine pencils and the use of caustics of many kinds for the treatment of ulceration of the cervix, which shows that for a long time the Egyptian physicians had been in the habit of treating pathological conditions of the cervix uteri, and no doubt many of these so-called ulcers were unrecognized lacerations.

During the dark ages this learning seems to have been lost and its revival was slow. At first this class of troubles were treated by the most heroic measures. Patients were bled from the arm; large numbers of leeches were applied to the cervix and the unfortunate woman was freely rubbed with ointments of antimony, so that in a few days they were unable to sit up without fainting, and according to reports of cases left, the patients were cured. This mode of treatment was followed by the use of vaginal douches of different kinds. (1).

In reviewing the medical literature of the 17th century we find in the writings of Ambrose Pare in 1640, that ulcers of the womb may be recognized by the sight or by putting in a speculum.

In 1851, Sir James Simpson drew attention to the fact that lacerations of the cervix uteri are of very frequent occurrence.

Some of the evil results of the condition, too, were recognized, as will be seen by reference to Dr. Gardner's work published in 1856.

Professor Roser, of Marburg, in 1861,

wrote of ectropium of the cervix as a cause of so-called ulcers of that part.

It was not until Nov. 27, 1862, that our own countryman, Thomas Addis Emmet brought the anterior and posterior lips of the cervix together with his tenaculum and demonstrated to the surgical world that the important pathological lesion known and described up to that time as an ulceration, was in reality a laceration, and at the same time furnished us the first stepping stone to the safe and efficient cure, through his famous Trachelorrhaphy. If Emmet had contributed nothing more to modern gynecology, he would deserve our undying gratitude.

Forty-three years have now passed since Emmet's operation for the repair of the lacerated cervix was first practiced. Emmet still holds to the opinion that in properly selected cases, and with the operation properly performed, better results can be obtained through its means than by any other. For many years he held to the opinion that it was possible in almost every instance, by careful local and general treatment, to restore in time the lacerated tissue to so near the normal condition that when the operation has been properly performed, complete restoration would take place, with the result of bringing about involution of the uterus.

In a paper read before The American Gynecological Society, May 6, 1897, Emmet says that in exceptional cases, it is better surgery to amputate a portion or a whole of the cervix, providing that the diseased tissues are completely removed and the wound afterward treated in a manner described by him. This mode of after treatment is all important because amputation is not sufficient in itself if the removal be done with a cautery, or the stump be left to cicatrize. His views in reference to the effect of resulting scar tissue in erectile tissue are so well known that it is not necessary for me to go into the details of this most important subject. (2).

All extensive injuries of the cervix are likely to be followed by cicatricial infiltration, which more or less completely displaces the normal myometrium, replacing the elastic cervical muscle by scar tissue as dense and

hard as cartilage. The mucous membrane of the canal is altered in time, the columnar epithelium being replaced by squamous epithelium, the arborvitae being obliterated and the mouths of the cervical glands obstructed so that the cervix is studded by little retention cysts that appear on the surface of the vaginal portion as small vesicles. These mucous follicles are estimated by Tyler-Smith to number 10,000 in the virgin cervix.

In consequence of the irritation of the cervix from cicatricial infiltration, the obstruction of the glands, and possibly its fixation by adhesions, there is a hyperplasia of all the constituent parts, muscle, connective tissue and glands, causing hypertrophy of the vaginal portion, which becomes heavy and large, filling the vaginal vault and dragging upon the uterus. In other cases there is a partial necrosis of the vaginal portion, reducing it to a mass of fibrous tissue covered with squamous epithelium. (3).

Now, if an attempt be made to repair a lacerated cervix, complicated by such extensively diseased tissue as just described, by performing the old and familiar trachelorrhaphy, you will in all likelihood, and to your own satisfaction, bring the lips of the cervix together with the sutures, and no doubt you will have a normal looking cervix as far as external appearance goes; but let us stop a few moments and consider what you have in reality accomplished.

In performing this operation you have perhaps shaved or whittled off some of the cervical tissue, and in doing this, no doubt, more has been removed from the vaginal side, for the only reason that it is more accessible and easier to remove than the more important diseased tissue which lies deep in the cervix. After having removed enough to satisfy yourself, you now bring the lips of the cervix together by drawing the thick vaginal mucous membrane in the shape of a prepuce over the still remaining pathological tissue within the cervix.

Emmet most assuredly taught us no such surgery as that, and your patient cannot be expected to receive the slightest benefit from such a procedure. On the contrary, it

is bad surgery to shut in from proper drainage, tissues that should be removed. You have also added to the patient's discomfiture by establishing a source of irritation due to the retention of the uterine secretions within the pouch which has thus been formed over the cervical canal. No improvement can be expected to take place after such a procedure. The uterus will increase greatly in size and marked reflex symptoms may develop. (4).

Eventually amputation will be resorted to and the health of the patient restored. (5). On examining the tissue removed from such a case, we see the glands forming the chief element of the tissue, while the interstitial tissue is more and more displaced by them. The glands, increased in number, (hyperplasia) are close together, but preserve their epithelium and their glandular form without change. This growth, caused by inflammatory processes, remains confined to the superficial layers of the mucous membrane.

In case of enlargement of the glands (hypertrophy), they increase considerably in size. In some cases, although they are normally only depressions of the cervical epithelium, they may pass through the entire thickness of the vaginal portion up to the squamous epithelium, where they sometimes lift the latter off entirely. Through a co-existing proliferation of the connective tissue, the glands possess no even calibre, but are narrowed by projecting folds. These may lie so close together that a canal is scarcely present. The cells of the opposing sides are in contact and may unite. Since the irritating cause increases the secretion of the epithelial cells, and since the narrowing of the gland lumen permits no sufficient outflow, an excessive dilatation of the glands may result. These may in the course of time be cut off from their ducts and form cysts.

Emmet likens the condition of such a cervix to that found in the tonsil which has long been subjected to frequent attacks of inflammation, and when the only reliable procedure is extirpation. Furthermore, in performing trachelorrhaphy upon such a case, you must necessarily maintain a strip of cer-

vical mucosa throughout its length, and must leave such diseased glands and cysts as lie beneath this strip of mucosa.

This operation is much abused. A mere separation of the tissue in the vaginal cervix does not call for operation.

(6). A unilateral tear, as a rule, needs no treatment unless there be extensive cicatrization. A stellate tear without erosion or ectropion, does not necessarily demand operation. A bilateral tear with ectropion, but with no erosion, without evidences of extensive cicatrization, and with no associated leukorrhea or metorrhagia, is not in itself an indication for operation. On the contrary, if there is erosion and ectropion with leukorrhea and menorrhagia, hypertrophy or cicatricial infiltration, amputation and not trachelorrhaphy is indicated.

The cervix was formerly amputated with the knife or scissors in a straight plane and the hemorrhage was usually checked by the application of chloride of iron. If this did not succeed, the actual cautery was employed. Union by first intention under such conditions could not be obtained, and the wound was allowed to granulate with the formation of much scar tissue. The obtainance of a patulous os to the cervical canal, which is of such importance, was not under the control of the surgeon, but was left entirely to chance, with the result that in many cases the os was either entirely closed, or a stenosis produced within the cervical canal, with all its disagreeable symptoms.

There was also danger from the cautery eschar and the serum of the wound giving rise to sepsis.

Hemorrhage would often take place from the eroded vessels and endanger the life of the patient.

All these disadvantages are avoided, if the hemorrhage is checked by ligatures, or the proper application of sutures to the denuded surface.

Sims was the first surgeon to apply suture of the wound after amputation of the cervix. He desired to cover the cervical stump with mucous membrane, by passing on each side of the cervical canal, two silver wires from

before backward through the cut surface of the vagina, and thus cover the stump with mucous membrane in such a way that only a small oval opening is made in the middle. This left a cavity behind the line of union within which blood and secretions gathered and sometimes resulted in the formation of an abscess. The effect from either complication would be to tear out the suture, while the entrance to the uterine canal, almost without exception, would close in time after the operation.

Emmet was greatly impressed the first time he witnessed the advantage of covering the stump, with the expectation of thus obtaining primary union, yet he labored several years before he succeeded in perfecting this operation according to his views. (7). This operation he performed many years before the publication of Schroeder's; an operation in principle like Schroeder's, but different in technique.

Emmet amputates the cervix piece by piece in the form of a cone, by cutting always toward the center, until all the diseased tissue present is removed. Silver wire is then used to bring the flaps in apposition.

Hegar's amputation differs from Emmet's in the fact that he uses the knife instead of the scissors. Hirst has modified the placing of the sutures in this operation.

Simon removes a wedge shaped piece from the whole width of each lip, and a longitudinal piece from the inner edge on both sides.

Noble, of Philadelphia, (8) amputates the hypertrophied portion by splitting the cervix, dissecting the vaginal tissue back with the knife, and then amputating each half of the cervix with the knife or scissors. The cervix is cut squarely across. Six sutures are used to form the new os.

In the Schroeder operation the cervix is split laterally and the whole cervical mucosa, with a great part of the myometrium, is excised.

The placing of the sutures employed in the different amputations can best be followed by referring to the drawings I present to you.

For a number of years I have found in re-

moving the silkworm gut sutures employed in the different methods of amputation, that I would sometimes encounter a granulating surface with the consequent formation of some scar tissue, this was no doubt due to the tension which is sometimes required to bring both vaginal tissue and cervical stump together. The silkworm gut would cut through the vaginal tissue, allowing it to retract back over the cervical stump and, healing would take place, not with first, but second intention. To overcome this condition, I have for sometime practiced a modification of Schroeder's operation in the following manner:

A careful bi-manual examination should be made in all cases, to exclude inflamed, distended or adherent tubes and ovaries.

As in all plastic operations in the pelvis, but especially those upon the cervix, a careful dilatation, followed by a systematic curettage should be practiced, for the almost always co-existing, *endometritis*.

A very important point before beginning the operation is to establish with some accuracy, the line of vaginal junction, so the bladder will not be entered in front. This is best done by passing a sound into the bladder under the strictest aseptic precaution.

The cervix is now steadied by an assistant and held just within the vaginal outlet; with the straight scissors two flaps are now created. By making firm traction with the *vossella* forceps, it is comparatively simple to scalp the cervix with the knife, dissecting the vaginal tissue back about one-half inch or more. Upon the anterior flap of the cervix and at right angles to the direction of the cervical canal, a transverse cut is made across the face of the flap to the depth of about one-quarter inch. Another cut is made obliquely down through the tissues of the cervix to join this, but not including the vaginal strip which has been dissected back. You thus remove a wedge shaped piece. The same procedure is gone through with in the posterior lip.

A portion of the posterior vaginal flap in the median line is now united to the cervical canal by two interrupted chromicized catgut sutures; the needle entering the center of

the vaginal tissue and passing over the intervening part of the cervical stump, enters above and is then brought out of the uterine canal. The anterior portion is now treated in the same manner. If we follow the course of either of these sutures, it will be apparent that when they are tied, the free vaginal tissue will be drawn over the cervical stump to the uterine canal; thus forming a new anterior and posterior lip of the external os. One end of each suture will be left long and the other cut short. The resulting raw surface of the cervical stump must now be united with interrupted catgut sutures which approximate the cut surface, but do not include the vaginal tissue. As these cervical sutures become buried when you finish your operation by bringing the vaginal tissue over the cervical stump with a running suture of fine catgut, the end of which is tied to the long end of the suture employed in creating the new canal on the anterior side. The opposite side is treated in the same manner with the exception that you tie your running suture to the long end of the suture on the posterior side.

Sutures No. 1 are used to form a new canal. Sutures No. 2 are used to bring the cervical stump together, and to control hemorrhage. Sutures No. 3 unite the vaginal flaps over the cervical stump.

When suture No. 1 is tied, you will find that it will pull the cervical canal up and down, and when Suture No. 3 is tied to Suture No. 1, it will pull the cervical canal laterally. You consequently create a patulous canal lined on all sides with squamous instead of columnar epithelium.

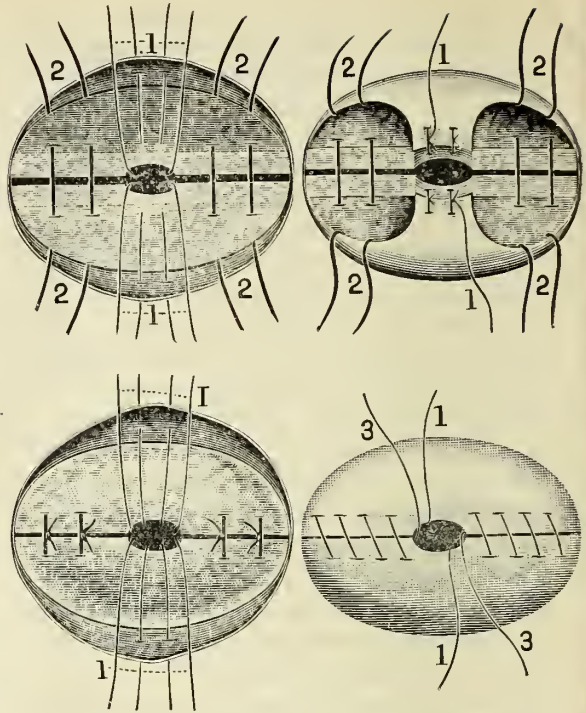
A loose gauze pack is placed in the vagina to absorb the discharges for the first two or three days, after which it is removed and the outlet simply protected by boric acid powder and a vulvar pad. If there is any discharge after this, the vagina should be douched out daily with a boric acid solution.

If no operation has been performed on the vaginal outlet, the patient is allowed to be up in two weeks. Neurasthenic patients should be kept in bed eight weeks longer, to get the benefit of a rest cure.

Before concluding, I would like to add a few more words. Do not attribute all the ailments of womankind to lacerations, no matter how severe. I am of the firm opinion that too often, the general practitioner in making a gynecological examination, stops whenever he finds something abnormal in the vaginal vault, instead of carrying his investigation higher up, and determining accurately by careful bimanual examination, the position, size, mobility, constituency and sensitiveness, first of the uterus, then of the tubes and ovaries. Unless you can do this thoroughly, you are not in a position to advise the appropriate treatment.

Again, the question may arise; after operation upon the cervix, how will this effect the patient in future labors? Will the tissues re-lacerate and another operation become necessary? To this question I will answer: If you have removed all diseased tissue present, and have a cervix as nearly normal as nature intended, you will encounter but little trouble, providing no infection follows confinement.

In connection with this question, I would like to state that I am a firm believer in the theory of the late Dr. Pryor, (9) that nature intended women to propagate at the age of fifteen or sixteen years. It is interesting to know that at this age there is scarcely any vaginal portion of the cervix, and at this time her labors would be easy, and any injury to the cervix unlikely; but civilization has decreed that the exercise of this greatest of all physical gifts shall be postponed to about the twenty-fifth year. During all these years of waiting, certain subtle changes have been going on in the cervix, as well as the body of the uterus. The chief characteristic of which is an increase in the vaginal portion, not in all cases, but in many. Such a woman coming to her first childbed will suffer an injury to the distorted cervix. (10). Compare this condition to women at or below sixteen years where complications are rare and labor takes place quickly and easily. The laceration, then, is usually a tear in a cervix already abnormal.



A. The vaginal tissue has been dissected back and the diseased cervical tissues removed. Suture Nos. 1 and 2 are applied.

B. The vaginal mucosa is drawn over the cervical stump by tying Suture No. 1.

C. The resulting raw surface of the cervix is united by tying Sutures No. 2.

D. The operation is completed by tying Sutures No. 1 to No. 3.

REFERENCE.

- (1). Ralph Waldo in *The Amer. Jour. of Obstet.*, Vol. 25, No. 3.
- (2). Emmet in *Amer. Gyn. and Obstet. Jour.*, Vol. 11, No. 3.
- (3). Hirst's *Gynecology*.
- (4). Emmet in *Amer. Gyn. and Obstet. Jour.*, Sept., 1897.
- (5). Abel's *Gyn. Pathology*.
- (6). Hirst's *Gynecology*.
- (7). Dudley's *Gynecology*.
- (8). *Amer. Jour. Obstet.*, Vol. XLV, No. 291.
- (9). Pryor's *Gynecology*.
- (10). Georges Picard in *Zentralblatt Für Gyn.* No. 6, 1905.

IMPOTENCE AND STERILITY DUE TO GONORRHEA.*

FREDERICK A. LEUSMAN, M. D., CHICAGO.

Homo sum nisi humanum a me alienum puto.

At a meeting of medical gentlemen held not so very long ago, when the subject for discussion was sexual frigidity in the female, a guest ventured to bring up the question as to where—in what organs—the seat or seats of sexual erethism were located, an unsolved question, important from a physiological and treatment point of view. For some reason known only to him, a member rose and moved to strike out the question from the proceedings.

Now, Mr. President, ladies and gentlemen, in approaching the subject allotted to me tonight, we are of course not interested in an investigation of the motive that prompted this man to an effort to quash scientific inquiry; but I have alluded to this incident both as an illustration and as a sad commentary, to show how difficult it is, even in medical circles, to properly discuss questions of a sexual nature.

Giordano Bruno was cremated alive for desiring to know the truth in the face of the pleasure of self-constituted authority; but Galileo's earth still is turning around the sun, despite an injunction to the contrary granted in his time.

Ignorance, pedantry, superstition, bigotry, malevolence or mock modesty, while acting as a temporary obstacle, have never been able to permanently block the wheel of scientific progress and inquiry.

Decorum and an attitude of respect must ever form the foundation stone of all discussions.

The general practitioner, to whom, with the hope of experiencing relief the trusting patient, male or female, confidently applies, wants to know all about impotence and sterility due to gonorrhoeal infection, because like Dr. Deaver's prayer for a daily case of appendicitis, it is his daily occurrence to be consulted for the cure of impotency and ster-

ility, and both as a rule can usually be traced as consequences of this popular disease.

The sanitary police officer must know in what direction, in what manner and how far he is to turn his energies to instruct the public, and to prevent not only the dissemination of small pox contagion, but also venereal diseases.

The legislator must know so as to be in a position to formulate laws in correspondence with the advanced knowledge and needs of the day.

The public must know, so as to be on their guard, proper information will deter many from the committment of errors, besides, proper care immediately applied after exposure will lead to a greater per cent of recoveries.

The daily experience of every practitioner in the city, and even the country, shows the wide distribution of gonorrhoeal infection, children and infants not excepted. Modern travel leads to infection of even the smallest hamlet. Whether gonorrhoea is a disease of civilization, like lying is said to be, we do not know. Some savage races shared the women in their tribes, while equally savage races placed the death penalty on any one that infringed on the marital privileges of their monogamous marriages. Present day experiences plainly show that promiscuous intercourse leads to disease of both body and mind, mostly gonorrhoea, while single wedlock is the only pathway towards happiness, order and culture. Impotence and sterility are the wages meted out to those that would disregard the iron laws of nature, by thus preventing their reproduction.

The preventive treatment must properly begin with infancy and youth. That at once raises the question disputed by many, shall we teach, say at puberty, our boys and our girls, that there is confronting them a sexual life, that they will have to learn to respectfully view certain phases of their sexual nature, as emissions and menstruation, that they must be made to understand the necessity of keeping themselves scrupulously clean, prepuce, vulva and anus included. They will be taught to view with suspicion

*Read at a meeting of the Chicago Medical Society.

all information of a sexual nature that does not filter down to them through honest and trustworthy channels.

Or shall we support the school of those who believe it best to let the girls find out about themselves as happy-go-lucky circumstances may chance, to let the boy be instructed by an older and perhaps evil companion into the early ways of vice and masturbation.

For my part, I believe the proper plans in detail can be formulated by the physician and teacher in conjunction. Aseptic surgery is barely twenty-five years old. It took us a long time to learn that there was such a science as paediatrics. We have found out a great deal about how to feed and care for the baby, let us fill out properly written the chapter on sexual instruction. Let us, by free discussion, learn first how to be decorous ourselves, and then secondly, how to decorously instruct others in *rebus sexualibus* or otherwise. We must learn how best to reach the young, at what age and in what manner and under whose auspices. The parents, as observation shows, have proved their utter incapacity in this respect, nor could we wisely expect all parents to be teachers and physicians.

As to the grown up people, it will be necessary to demonstrate to men and women alike, of how far reaching consequence gonorrhoeal infection is possessed of, they must be taught to immediately consult a competent physician when there is some urinary disorder, or a discharge urethral or vaginal. When it becomes still more common property than it is already doing of its own account, that the microscope will definitely prove whether or not the trouble is of gonorrhoeal origin, especially in all recent cases, then the fear of exposure and consequences will have a beneficent influence in tending to keep straying sheep on the right path. Children and grown up people must be made aware of the pernicious influence of alcohol on sexual activities. Children and grown up people must be made to appreciate by precept and example, the noble virtue of self control, the sexual impulse included. No alcohol,

not much meat, wholesome labor in wholesome rooms and places and under wholesome conditions.

The sanitary police officer will see that there is no loafing among the rich or poor, that the successful and greedy do not take undue advantage of the successful and unfortunate, to house and over-work them under unsanitary conditions, the filth and degradation of the shop leading to moral death and gonorrhoeal infection, with impotence and sterility as nature's remedy to stop the further progress of vice.

We further are in need of free and sober discussion whether and in what manner school children shall be submitted to a proper physical and sexual examination, boys by a male and girls by a female physician, so as to determine whether a phimosis or adherent clitoris needs attention, etc., in one word, whether there is sexual or other disease, and their local hygiene in proper observance.

We must also remember how often gonorrhoeal infection is conveyed from grown up people to children and from child to child, by allowing more than one person to sleep in the same bed. All double bedsteads must be done away with as unsanitary from a physical and mental point of view.

The wise legislator, not bribed by praedatory wealth, but stimulated by a feeling of just pride and honor, engendered by the possibilities for good inherent in his position, will formulate proper laws so there will be no clash between parents and children, private rights and public privilege.

The question must also be ventilated from the socio-economic and psychiatric standpoint, along such lines as Dr. Barnardo, in London, is doing now.

As to the treatment of the individual case, male or female, it is that of the disease and largely surgical.

Azoospermia, as a rule, is due to obliteration of the seminal route, especially the vas and epididymis, one of the terminal results of gonorrhoeal infection. Liègeois under 83 cases of bilateral gonorrhoea epididymitis found 75 times permanent azoospermia. Kehrler, in a series of 96 sterile marriages,

found azoospermia to be present in 30 per cent, impotence in 3 per cent. Resection of the vas as a cure has been tried, but not sufficiently often, to establish the measure as successful intervention. The gynecologist, before submitting his confiding woman patient to manipulations, operative or otherwise, when approached for the cure of sterility, will realize the necessity of beginning this treatment with the man. Impotentia coeundi as a rule is due to prostatitis or urethral stricture of gonorrhoeal origin. In the female, the common cause of impotence, frigidity and sterility, is chronic gonorrhoeal tubo-ovarian inflammation, endometritis and urethritis.

THE RELATION OF THE HEART AND KIDNEYS IN DISEASE.

BY CHARLES E. WILKINSON, M. D., DANVILLE.

The fact that the heart is frequently affected as a result of some diseases of the kidneys and that the kidneys suffer in consequence of disease of the heart is generally appreciated.

The disturbance of the heart associated with nephritis did not escape the acute observation of Bright himself as early as 1827; but this condition was first generally known when Traube, in 1856, in a treatise which has become famous, explained that a change in the heart was very common in certain forms of renal affections, and thus gave the chief impulse for the numerous clinical and experimental investigations that have been made since then as to the connection between cardiac and renal diseases.

The explanation for this connection at the present time is not absolutely satisfactory, so it is my purpose to present the most accepted theories—for theories they must be—as to the manner in which such changes are produced.

The association admits of the following classification:

First.—The heart may be the primary disease and only secondarily lead to a disturbance of the kidney.

Second.—The renal affection may be the primary disease and of itself the cause of a change in the heart, especially of a secondary hypertrophy of the left ventricle.

Third.—The heart disease and the renal affection may also develop independently of each other, as a result of an injurious influence that affects both organs at the same time.

First.—When the heart disease is the primary trouble.

As a result of heart disease, which may be an endocarditis (mitral insufficiency), or a myocarditis, the kidneys may be secondarily affected. In this way is developed the kidney of passive congestion, acute nephritis secondary to acute or recurrent endocarditis and the embolic processes in the kidney.

In diseases of the heart where the compensation is broken, the weakened condition of the circulation and the diminution of the arterial tension lead to a congestion of the different organs of the body and the effect on the kidneys is evident. In particular, there is a diminution in the quantity of urine, especially if the patient is dropsical at the same time. The urine falls in amount as low as 800 to 500 cubic centimeters (27 to 17 ounces) or even less in twenty-four hours. It becomes dark, concentrated, of high specific gravity, and abnormally acid, and hence it has usually an abundant sediment of urate of sodium. In marked degrees of stasis there is albumen in the urine as a result of the damage done the glomerular epithelium. The amount of albumen is usually slight, but it may equal one-third or one-fourth the volume of urine. Under the microscope, we find in the urine of simple passive congestion, only an occasional hyaline cast and a few red and white blood corpuscles.

Careful examination of the urine in cases of severe heart disease is of the greatest practical importance, for the character of the urine as shown by the color, specific gravity, and amount of albumen is an excellent index of the vigor of the heart and the condition of the circulation. Any change for the worse in the cardiac disturbance affects the circula-

lation and is directly shown in a diminution of the amount of urine and an increase in its specific gravity, or it may be in the appearance of an albuminuria. Any improvement in the condition of the heart, whether spontaneous or due to the remedies administered, is shown first and clearest in the daily excretion of urine and a corresponding diminution in its specific gravity. If the changes mentioned come on as one symptom of a general venous stasis and are, accordingly, associated with cyanosis and dropsy, the diagnosis of congested kidney can be made with certainty.

The congested kidney is easily recognized anatomically. The organ is often somewhat enlarged, it feels firmer than normal, and shows both on its surface and section a dark blueish-red color, spoken of as "cyanotic induration." The medullary substance is usually darker than the cortex. Under the microscope we see considerable dilatation and a tense fullness of the veins and capillaries. The parenchyma is normal, but in more advanced cases it may show a beginning fatty degeneration of the epithelium, which is a result of the defective arterial blood supply. At first the interstitial tissue is little changed, but if the congestion persists for a long while, there may be a gradual destruction of the renal parenchyma to a certain degree, with the formation of an abundance of contractile interstitial tissue (contracted kidney).

We not infrequently meet with acute and chronic nephritis, particularly arterio-sclerotic nephritis, complicating organic heart disease. It is not an easy matter to clinically form a correct opinion as to the primary cause in such cases.

Embotic Processes or Infarction in the Kidney.—The slowing of the circulation and the disturbance of the nutrition of the walls of the vessels, which result from it, often give rise in heart disease to the formation of thrombi. These are situated in the heart itself, on the diseased valves, in the recesses between the trabeculae, in the auricles, or else they may form in the veins, especially in those of the lower extremities. From these

thrombi fibrinous plugs may be set loose and enter the circulation and thus give rise to embolic processes in other organs.

Since the renal infarction, although it has great pathological interest, is hardly ever of clinical significance, we shall only give a brief description of the most essential points.

If one of the renal arteries is plugged by an embolus in heart disease, the portion of the organ cut off from the circulation must perish since all the renal arteries are terminal arteries. The epithelium undergoes the well known changes of coagulation necrosis, disappearance of the nuclei of the cells and disintegration, and the tissue becomes entirely or in part a hemorrhagic infarction. In this way arise the characteristic wedge-shaped, red hemorrhagic infarction in the kidney, or far more frequently the yellowish-gray anaemic infarction (often surrounded by a hemorrhagic areola), the base of which is the surface of the kidney. The base may reach a width of half a centimetre to a centimetre or more, while the apex extends a varying distance into the cortex, or even into the medullary substance. Later on the gradually disintegrated tissue of the infarction is absorbed, round cells emigrate from without into the region destroyed and a shrunken connective tissue cicatrix gradually develops in place of the former infarction. Many kidneys may have such a granular surface from numerous infarction cicatrices that they may be appropriately termed the "embolic contracted kidney."

The anatomical processes just described cause in most cases no special clinical symptoms at all. Sometimes, however, a slight amount of blood in the urine seems to depend on a hemorrhagic infarction in the kidney, so that when a cause for embolic processes, such as endocarditis is present, we may entertain the suspicion of the development of a renal infarction during life. In rare cases the development of a rather large infarction is associated with a sudden and violent pain in that region, with marked subsequent haematuria, or as has been observed by Strumple in one case of haemoglobinuria.

The embolic processes in the kidney never demand special treatment.

Secondly.—The renal affection may be the primary disease and of itself the cause of a change in the heart, especially of a secondary hypertrophy of the left ventricle. At present there can no longer be any doubt of the fact of this dependence. We also know that the secondary development of cardiac hypertrophy is not confined to one form of chronic nephritis—the so-called contracted kidney as was first believed, but it is almost as constant in all other forms of chronic and also in prolonged acute nephritis. Opinions are at present much divided as to the precise nature of this connection and as to the casual factor.

The theory which Traube himself advanced for the explanation of the cardiac hypertrophy in nephritis, rested on the assumption, that, in the first place less water is withdrawn from the blood in nephritis for the formation of the renal secretion and that in the second place, the flow of the arterial blood into the venous system is hindered by the changes in the kidneys, particularly by the destruction of many of the smaller blood vessels. Both circumstances he concluded must raise the blood pressure in the arterial system and therefore gradually lead to cardiac hypertrophy. Traube's theory cannot be maintained. The first claim, especially is untenable, because in many cases of chronic contraction of the kidney with co-existing hypertrophy of the heart, there is never diminution of the elimination of water by the kidneys and besides, this can never of itself cause an increase of the arterial pressure. The second supposition, that the destruction or the narrowing of the large number of the small blood vessels of the kidneys must produce a general rise of the arterial tension, is disproved by the fact that even the complete ligation of both renal arteries does not raise the tension in the arterial system because the blood at once passes off into other vessels which dilate.

In place of the "mechanical theory" there have been of late many supporters of the "chemical theory" of cardiac hypertrophy, which was in a certain sense propounded by

Bright himself and later by Johnson and others. This view with some modification is held by Strümpfle, viz:—"the retention of urinary constituents in the blood is the cause of cardiac hypertrophy because the retained material occasions a rise in the arterial tension, and this increased tension, if it persists for a sufficiently long time, must occasion a hypertrophy of the left ventricle on account of the increased amount of work called upon the heart to perform. Clinical experience shows beyond a doubt, that any severe case of acute nephritis occasions in a few days an increase in the arterial tension which can usually be perceived by the pulse. This increased tension, which certainly precedes the cardiac hypertrophy, is best explained by the supposition that the matters which ought to be but are not excreted, occasions a contraction of the smaller arteries. It is also possible to conceive that there may be a direct irritation of the cardiac muscles. At any rate, the occurrence of a rise in the arterial tension is of decided benefit to the body as it promotes the excretion of urine. If in the course of a nephritis, the normal conditions return after a few days or weeks, the increased tension is relaxed and the heart suffers no noticeable change; but if the nephritis and consequent impairment in the urinary secretion and increased arterial pressure persist for a considerable time, we often see, even after six or eight weeks, a hypertrophy of the left ventricle develop in a way that can be demonstrated most distinctly at the bed-side. This is the necessary consequence of the increased effort which the heart is obliged to make in order to overcome the abnormal resistance in the systemic arteries.

We have the same conditions precisely in the chronic forms of nephritis, except that they develop more slowly and insidiously. In these, also, the first factor is the insufficiency of the kidneys occasioned by the disease—that is—failure to excrete all the products of metabolism. To this the body responds immediately by a rise in arterial tension, which is intended to serve and does actually serve as a compensation of the impairment; then later the hypertrophy of the

left ventricle develops and enables the heart for a long while to supply the demand put upon it. This hypertrophy is consequently the most important and indispensable compensatory arrangement by means of which the body is protected from the onset of uræmic intoxication. Just as any patient with valvular heart disease would invariably fail much earlier if his heart did not become hypertrophied in portions corresponding to the lesion, so, also, in chronic nephritis the unfavorable termination would occur much earlier if the body were not in a position to effect and maintain an increase in the arterial tension and thus ward off the threatening enemy. Viewed in this light, the "chemical theory" of cardiac hypertrophy not only gives us an insight into the clinical phenomenon as such, but also enables us to perceive its true significance."

Senator has long observed a notable difference in the composition of the blood in cases of parenchymatous nephritis from that found in chronic interstitial nephritis. In parenchymatous nephritis the molecular concentration of the blood is not particularly altered, but in interstitial nephritis it is increased. The amount of albumen and the specific gravity of the blood are diminished in parenchymatous nephritis but is normal in the interstitial form. Retention nitrogen, i. e., the nitrogenous substances which remain in the blood after the albumen has been removed, is not increased in parenchymatous nephritis, but is to a great extent in interstitial nephritis. The toxicity of the blood is diminished in parenchymatous nephritis but is increased in the interstitial form.

Some have claimed that irritating substances present in the blood in chronic parenchymatous nephritis are such as to act on all parts of the circulatory system and tend to bring about a general hypertrophy.

What the substances are that occasion the rise in the arterial tension cannot be answered at present; but it is evident that the results of experiment indicate that urea probably does not play the most essential and certainly not the sole part in the matter.

There is a change in the permeability of

the walls of the blood vessels, especially those of the general circulation, which leads to a dropsical transudation which can be looked upon as aiding the organism by removing part of the noxious substances from the blood.

Tyson states that he inclines to the belief that "we should not lose sight of the possibility that the primary changes in the heart may be compensatory in their nature, set up with a view of supplementing the gradual loss of renal substance. Such an action is paralleled everywhere in the physiological economy. Nowhere do we meet with loss of function which is not at once met by an attempt of nature to compensate for it. The dependence of the urinary secretion upon the cardiac pressure is well understood and an increase of the cardiac power is the most reliable means available for stimulating the action of the kidneys when desired in therapeutics. The diuresis which is so constant a symptom of the contracted kidney is acknowledged to be the direct result of a supplemental contraction of the left ventricle, which it is reasonable to suppose is induced for the purpose named and results in hypertrophy."

What is the subsequent course of the disease? So long as the free secretion of urine continues, so long will the patient remain tolerably comfortable and perhaps even for a time unconscious of the presence of the disease. But an organ overgrown is sure, sooner or later, to suffer in its nutrition. Especially is this the case if the arteries be the seat of an endarteritis, interfering with the free movement of the blood, and producing also fibro-myocarditis. Later in the course of the disease, the strong propulsive power of the heart declines, the pulse falls away in tension and power and becomes more frequent and sometimes irregular. The urine diminishes in quantity and assumes a darker hue. Fortunate is the patient if the specific gravity of the urine rises inversely with its reduced quantity, as it indicates that the normal excretion of solids is kept up. Too frequently this is not the case and excrementitious substances accumulate in the

blood, laying the foundation for uraemia. Headache, nausea, a foul and even an urinous breath may be superadded and uraemia sets in, preceded by drowsiness, or it may be ushered in suddenly with convulsions. Or another set of symptoms may supervene—the patient becomes short of breath at first, and later this very distressing symptom occurs without any exciting cause. For a time this sort of asthmatic breathing may be averted by whipping up the heart by cardiac stimulants and the right ventricle even comes to the rescue for a time and hypertrophies in its effort to overcome the now disturbed compensation. Subsequently this as well as the left ventricle may become dilated and edema of the lungs sets in, with an annoying cough and serous, frothy, expectoration—sometimes blood tinged. Dropsy ensues sooner or later with growing heart failure. These symptoms may subside for a time but recur and death is the ultimate consequence.

In the third place—where the heart and kidney disease is produced by the same cause.—Heart disease and renal affections may also develop independently of each other as a result of an injurious influence that affects both organs at the same time. Thus, for example, a general arterio-sclerosis leads to cardiac hypertrophy or to myocarditis, and also to granular kidney as a result of an implication of the renal vessels. Certain other injurious influences such as toxic and constitutional influences, alcohol, syphilis, or improper living, may also cause a disease of the heart and kidneys at the same time. Later on, if both affections have developed, their influence on each other is often, of course considerable—a circumstance which may render our judgment as to the condition decidedly difficult.

In arterio-sclerosis the cardiac disturbance is hypertrophy of the left ventricle. This is occasioned by the increased resistance to the arterial circulation and a compensatory act in order to enable the heart to perform the extra work called upon it. This condition is often apparent during life from the strength of the apex beat and its displacement to the left, and also from extension of

the cardiac dulness to the left. On auscultation, the increased tension in the aortic system is made manifest by the strength of the aortic second sound. The examination of the heart is often rendered difficult by the presence of pulmonary emphysema. It is sometimes difficult to decide how far a manifest hypertrophy of the left ventricle is due to an arterio-sclerosis and not to other co-existing processes, such as contracted kidney.

We often have other anatomical changes in the heart besides hypertrophy of the left ventricle. Thus we have a myocarditis as a result of an extension of the sclerotic processes to the coronary arteries. The final result of this is a degenerative inflammation of the heart affecting principally the myocardium and resulting in weakness and irregularity of the heart's action. Sometimes from an invasion of the aortic valves by the atheromatous processes we get an insufficiency, or more rarely a stenosis of the aortic orifice. The degree of cardiac hypertrophy in arterio-sclerosis is sometimes enormous, especially when there is an insufficiency of the aortic orifice. The heart weighs in some cases as much as 850 grams (28 ounces). In twenty-seven cases studied by Councilman the average weight was over 400 grams (13 ounces), as contrasted with the normal 310 grams or 10 to 12 ounces.

In the kidney as a result of an arterio-sclerosis, there are alterations in the kidney, which vary greatly in extent, being sometimes scarcely noticeable and sometimes extreme, due to the direct result of an interference with the nutrition. The blood supply to the renal elements being cut off, these waste and ultimately disappear. The cells and tubules thus destroyed are gradually, but irresistibly, replaced by fibrous connective tissue. The origin of the granulated "senile kidney" is in large part atheroma of the renal arteries. I do not mean to infer that all cases of contracted kidney are due to arterio-sclerosis.

Syphilis.—The effect of syphilis on the heart by producing a form of disease of the coronary arteries deserves special mention. It is somewhat different from the ordinary

arterio-sclerosis although the number of proved cases is not great. It is scarcely possible to doubt that there is a specific syphilitic endarteritis of the coronary arteries giving rise to almost exactly the same symptoms as ordinary arterio-sclerosis. At any rate, this point should in every case be considered, for therapeutic reasons if none other.

The renal disturbance resulting in consequence of syphilis is probably of a secondary nature resulting from arterio-sclerosis where syphilis is the predisposing cause of the arterial disturbance.

Alcohol.—Certain forms of chronic intoxication are among the causes which frequently lead to acquired weakness of the myocardium or its nerves. The most important of these, from a clinical standpoint, is chronic alcoholism. The noxious influence of alcohol upon the heart is universally recognized, producing a weakness of the myocardium or toxic weakness of the heart. In chronic alcoholism, we find numerous organic diseases, including the contracted kidney, cirrhosis of the liver, heart disease, etc.

Strümpfle says that "experience teaches us that there are three chemical substances to be mentioned which may favor the development of contracted kidney, viz: Alcohol, lead and uric acid. Chronic alcoholism is often to be regarded as the most probable cause of renal contraction, especially in people who have "lived well" otherwise and have become corpulent. In these cases, contracted kidney is to be considered or viewed as a sort of atrophy, due to wearing out or strain. It is difficult to decide how much influence should be ascribed to the alcohol itself and how much to the ingestion of food. The specific effect of alcohol is almost indubitable in those cases in which contracted kidney and hepatic cirrhosis are both present, a combination repeatedly observed." We frequently see cases of apparent primary acute nephritis in great beer drinkers.

Infectious Diseases.—A very large proportion of the danger with which most of the Infectious diseases are fraught, lies in the mechanical burden which the heart must carry

and the chemical residuum from which the kidneys must rid the system.

In some of the infectious toxemias, as in pneumonia, the part called upon the heart is of most importance while in others as scarlet fever, the role of the kidneys as emunctories may be said to overshadow in importance the part taken by the heart in combating the disease and carrying the patient through to convalescence. This being the case, it is nothing more than to be expected that heart and kidney disturbance frequently result from some of the infectious diseases. To enter into an explanation and attempt to present the effect and probable manner in which disturbances of the heart and kidneys may result in consequence of the infectious diseases will require more time and space than we can give to it in this paper.

In conclusion I wish to refer to the following points:

1. When passive congestion occurs in connection with heart disease, the lesion is a mitral insufficiency.

2. Careful examination of the urine in cases of severe heart disease is of greatest practical importance, for the character of the urine as shown by the color, specific gravity, and amount of albumen is an excellent index of the vigor of the heart and the condition of the circulation.

3. When hematuria occurs in connection with endocarditis, we may entertain the suspicion of the development of a renal infarction.

4. Hypertrophy of the left ventricle develops in most all forms of chronic and also prolonged acute nephritis.

5. The "mechanical theory" that was first presented in explanation of the hypertrophy of the left ventricle in nephritis is not so generally accepted as the "chemical theory." In connection with this may be mentioned the compensatory act of the heart which is frequently observed where more work is put upon it.

6. We should bear in mind the possibility of an extension of the sclerotic processes to the valves of the aorta producing a stenosis or an insufficiency and that the mitral valve is not involved till late in the disease.

7. The condition of the heart and kidneys should be carefully watched in patients suffering with any of the infectious diseases, as the ultimate results depend upon these organs.

8. It is always interesting to be able to decide when possible, which is the primary disease when the heart and kidneys are both involved, but fortunately, this difficulty does not always extend to therapeutics, as the same remedies which are useful to one affection are commonly indicated for the other.

THE OPERATIVE TREATMENT OF EMPYEMA OF THE ANTRUM OF HIGHMORE.

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Brief Review of Anatomy and Pathology.—A cast of the interior of the maxillary antrum resembles somewhat in form a three-sided pyramid standing inverted upon its apex, its base corresponding to the roof of the cavity. The roof of the antrum also serves as the floor of the orbit, is thin and fragile and contains the channel for the infraorbital nerve. The three sides of the maxillary sinus converge at the bottom to form its floor, a broad rounded groove, extending sagittally above the molar teeth, whose sockets may project above the surface if the alveolar process be hollowed out to an unusual depth. The three walls of the antrum are called the facial, anterior or buccal wall; the temporal or posterior wall; and the nasal or inner wall.

The anterior, facial or buccal wall is the thickest and strongest, especially where a buttress of bone, dividing the facial from the posterior surface of the superior maxillary bone, extends from the first molar tooth to the malar process. The anterior dental nerve, branching from the infraorbital nerve descends in the facial wall and its filaments are distributed to the incisor, canine and first bicuspid tooth. This nerve anastomoses

with the posterior dental nerve opposite the canine fossa.

The posterior, temporal or zygomatic wall forms the anterior boundary of the zygomatic (pterygo-palatine) fossa. Immediately behind it lie the internal maxillary artery with its posterior nasal and descending palatine branches.

The inner or nasal wall (Fig. 1) is divided by the attachment along its whole length of the inferior turbinated body, into a stronger, bony lower portion, corresponding to the inferior meatus and a thin, partly membranous portion reaching to the attachment of the middle turbinated body and occupying the middle meatus. Underneath the middle turbinated body is found the groove behind the uncinate process of the ethmoid bone and between it and the bulla ethmoidalis, called the infundibulum. The small normal opening of the maxillary antrum is commonly found in this groove, together with the openings of the anterior ethmoidal cells, and the outlet of the frontal sinus, called the ductus naso-frontalis, is continuous with it at the top. In addition to the usual outlet there are often accessory openings of the maxillary sinus situated below the hiatus semilunaris in the middle meatus. Just in front of the nasal wall of the antrum is situated the lachrymal sac, slightly in advance of the anterior border of the middle turbinated body. The tear duct descends nearly vertically from it and opens under the lower turbinated body near the junction of its anterior and middle fourths.

The interior of the antrum in rare cases is found divided horizontally or vertically into compartments by more or less complete bony septa. Some antra are small, having very thick walls.

The antrum is lined with a thin, closely attached mucosa-periosteum bearing ciliated epithelium. Acute inflammation of this membrane causes but moderate swelling and inflammatory infiltration and even in chronic sinusitis it may for a long time remain but little thickened or altered. In most chronic cases, however, hypertrophic changes take place, so that the normally delicate mucous

membrane entirely changes its character, undergoing in some cases enormous fibrous thickening which nearly fills the lumen of the antrum, the surface of the altered mucosa remaining smooth or becoming warty or covered with irregular outgrowths. In other cases the interior of the cavity is found partly filled with masses of granulation tissue, thickened mucous folds and collections of polypi, while portions of the mucosa may undergo cystic degeneration. The fissures and sulci separating the loose irregular proliferations so formed, retain the secretions and

sinusitis maxillaris exulcerans aut exedens. In this manner abscesses of the orbit or of the zygomatic fossa may result which include the danger of brain abscess and meningitis, while in more fortunate cases the abscess forms over the facial wall of the antrum. Abscesses about the antrum may also occur without preceding caries, the septic process penetrating the bony wall by means of thrombosis of penetrating veinlets.

The discharge in inflammation of the maxillary antrum may be serous, purulent or even absent but it is usually pus and in

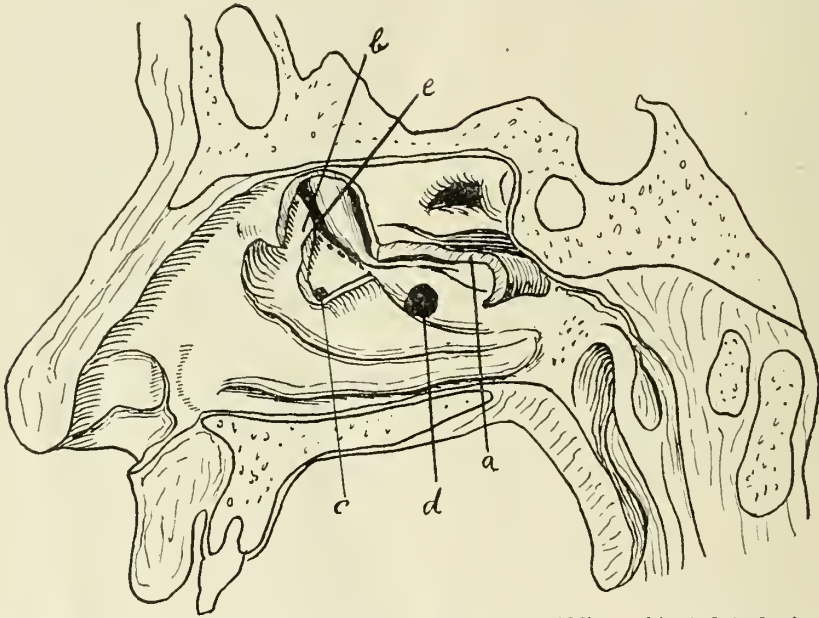


Figure 1. View of external wall of the nasal fossa. The middle turbinated body has been removed showing its cut edge, a; b, uncinate process of the ethmoid bone from which a V has been cut out to show the infundibulum underneath it with the normal opening of the maxillary antrum, c; d, accessory opening of the antrum; e, hiatus semilunaris.

lead to their stagnation and putrifaction. Even the bone may become affected in chronic maxillary sinusitis, chronic periostitis leading to the production of osteophytes that line the interior of the antrum. Caries or necrosis of bone may also occur. Localized caries often exists in the neighborhood of diseased teeth, but other parts of the antral wall may become necrosed because of penetrating ulcers of the mucosa. When this occurs there is danger that the suppuration will extend beyond the interior of the antrum and produce the fortunately rare condition called

chronic cases generally fetid, sometimes intensely so. The quantity of secretion varies from scarcely perceptible amounts that dry into crusts in the nasal passages, to quantities that require the constant use of the handkerchief. The serous forms of chronic sinusitis of the antrum are more pathological curiosities than important surgically and it is the purulent type of the disease that is of operative interest.

Reasons for Usual Obstinacy of the Disease.—The antrum is normally empty and collections of fluid in its interior are always

pathological and by reason of the structure of the sinus run off with difficulty. The small natural opening of the antrum, situated unfavorably near the top of the cavity when the patient is upright, is ill suited for drainage, readily narrowed by swelling and in addition polypoid proliferation and swelling of the mucosa of the middle turbinate and the infundibular region, resulting from chronic infection due to the outflow of pus, still further block this inadequate outlet so that the pus often needs to be under positive pressure from continued secretion in order to force its escape. Another obstacle to drainage is the deposit of fibrinous purulent and cheesy clots from the stagnant pus, these solid putrifying masses blocking the outlet which they are unable to pass and adhering to the lining of the antrum. The suppuration in maxillary sinusitis is however not only kept up because of bad drainage but also because the unyielding walls of the antrum cannot approach and obliterate its lumen, and hence the condition possesses the notorious tediousness of all suppurations in rigid walled cavities whose lining becomes too much altered by disease to return to its normal state, for though nature often attempts to fill up such cavities by the proliferation of connective tissue, this pathological hyperplasia in the case of the maxillary antrum usually results in so complete a degeneration of the mucosa, with the creation of cysts, polypi and exuberant outgrowths, that the suppuration can often only be checked by the more or less complete removal of these morbid products. Sometimes the bone has even to be completely bared and left to cover itself with granulations and later with epithelium derived from the healthy mucosa of the nasal passages before recovery can take place. The anatomical and pathological facts mentioned explain the obstinacy of the suppuration in chronic maxillary sinusitis, the inefficiency in most cases of anything but the freest drainage and the need in a number of instances of radical operations to cure the disease.

The Meibom-Cooper Operation Through the Alveolar Process.—One of the oldest but

least effective and yet most commonly employed operations for the relief of empyema of the antrum is alveolar drainage, the Meibom-Cooper operation. The method seems very plausible, for apparently it establishes drainage at the most dependent portion of the sinus when the patient is upright. A hole is drilled up into the antrum through the opening left by the extraction of a molar tooth or root, or if there be a vacant space instead of a tooth, the opening is made through the bone of the alveolar process after incision of the gum. A dental engine with a burr or trephine are the best implements for the operation.

The largest opening obtainable by the alveolar method is too small for efficient drainage, for purulent coagula, cheesy masses and thick pus can not pass through it, and patients therefore often resort to suction through the wound canal in their attempts to clear the cavity of secretion. To keep the hole from closing a gold or rubber tube or an obturator has to be worn constantly in it. These foreign bodies keep up a continual irritation, granulations sprout about the end of the tube in the antrum and often block it, while the new growth of bone in some cases is so vigorous that it tends to displace the oral end from its proper site between the teeth, interfering with mastication, or it makes it more and more difficult and painful to reintroduce the tube. Drainage through its easily obstructed little bore is so imperfect as to be largely illusory and the patient has to supplement it with frequent irrigations, which are only successful if the natural opening be free enough to act as a counter drain. In spite of daily washings with antiseptic solutions, however, the discharge is apt to keep putrid, to the disgust and injury of the patient. All of these annoyances make him dissatisfied with the mere palliation of his condition usually obtained by alveolar operation in chronic sinusitis. It is not to be denied, however, that there is a chance of recovery by its aid in some of the milder and more recent cases. A decidedly objectionable feature of the operation is the frequent need

of sacrificing a useful tooth for its performance.

The Kuester Operation Through the Facial Wall Alone.—The inefficiency of the alveolar method led to the operation of Kuester through the facial wall of the antrum. An incision to the bone is made in a line about a centimeter above the root of the canine tooth backward to the second molar; the mucous membrane of the upper lip and the periosteum of the facial wall above it is then scraped up with a raspatory to about $1\frac{1}{2}$ centimeters above the sockets of the teeth and an opening is made in the antrum above the roots of the second bicuspid and first molar teeth. The best instrument for this purpose is the trephine driven by a dental motor, the resulting opening being enlarged as wished by a burr. The chisel and rongeur forceps may also be used. Kuester made an opening large enough for the entrance of the little finger to explore the antrum and to permit the use of an ear speculum for inspection. More radical operators following Boenninghaus (Fraenkel's Archiv fuer Laryngologie, Vol. 6) and Jansen make the mucous membrane incision from the second incisor to the wisdom tooth and uplift the soft parts to the apertura pyriformis, (skeleton opening of the nose) to the base of the malar process, and to the foramen infraorbitale. If the mucosa lining the antrum be found extensively diseased the window in the facial wall is made as large as the denuded area, from the nasal wall of the antrum outward to the malar process, downward to the floor of the antrum and upward to the infraorbital foramen, removing thus the entire facial wall of the maxillary sinus. The diseased mucosa is then scraped away to the bone.

The hemorrhage in the operation through the facial wall is severe, and in most cases general narcosis is needed. Even the largest opening in this wall has a strong tendency to close up in time, so that obturators have to be constantly worn, with the usual result of irritation of the lining of the antrum and consequent sprouting of fungus granulations. Food is apt to get into the cavity, become lost in it and decay there, and the unnatural com-

munication between mouth and antrum is intensely disagreeable to the patient. The ragged aperture is also very sensitive. The injury to the anterior dental nerve is of no consequence for should numbness of the teeth be caused by it, it will disappear in a few days.

The Caldwell-Luc Operation.—These objections to a permanent communication between the antrum and the mouth led some operators to make the opening in the facial wall merely for the time of the operation, closing it by suture immediately afterwards, after the temporary facial aperture had been used for curettage of the cavity of the sinus and for the purpose of making a large permanent opening through the nasal wall from the antrum into the nasal cavity, preceded by the resection of a portion of the lower turbinated body. This is the method of Luc and Caldwell, called the Caldwell-Luc operation. Boenninghaus (Fraenkel's Archiv fuer Laryngologie, Vol. VI, 2) performing this operation in a more radical manner than its originators, first removes the whole of the facial wall and then cuts away the bone as much as possible from the entire nasal wall including the lower turbinated bone, which he dissects out from its mucous covering from within the antrum. The nasal mucous lining of the nasal wall he then forces with a tampon into the antrum in order to form a new mucous membrane for it in place of the diseased one curetted away. Berens (T. P. Berens, Chronic Multiple Sinusitis, The Laryngoscope, Vol. 14, 1904, p. 868), of New York, operates in a similar radical manner.

The Caldwell-Luc operation and its more radical modifications place the antrum in free communication with the air in the region of its natural opening into the nasal fossa. Even if the discharge do not cease the patient can blow it out with his handkerchief through the normal channel for its egress, the nose; he can readily irrigate the cavity; he is not annoyed by tubes or obturators in the mouth, and no foreign body is kept in the antrum. The method is therefore a great improvement of the Kuester op-

eration. Nevertheless the procedure is a comparatively formidable one, requires as a rule general narcosis, produces severe hemorrhage and seems out of proportion to the gravity of the disease as met with in the average case.

sult with much the least injury to the patient. It is the rhinologist who has of late thought out the operations through the nasal wall of the antrum which achieve with a minimum of traumatism, in all but exceptional cases, all that can be obtained by the severer meth-



Figure 2. S. S. Bishop's trephine.

Rhinological Operations.—The operations described up to this part of this article belong to general surgery, which prefers a direct attack on the seat of disease, no matter what the obstacles in the way, to reaching the field of operation by patient and difficult manipulations with the aid of reflected light in such a hidden and narrow cavity as the nose, even though this latter method, the method of the rhinologist, accomplish the re-

ods of general surgery.

The best modern methods of opening the antrum broadly through the nasal wall are the operation through the middle meatus and the more radical operation of ablation of nearly all of the nasal wall through the nose. Small openings such as that of Mikulicz made under the inferior turbinate are ineffective, close up again, and have been abandoned.

The Operation Through the Middle Meatus.—The hardness and thickness of the nasal wall in the inferior meatus led Siebenmann (Muenchener Med. Wochenschrift, 1900, No. 1) and Onodi (Fraenkel's Archiv, Vol. 14) to choose the thinner part of the wall in the middle meatus for making a permanent opening from the nose into the antrum, and for the cases without much pathological change in the mucosa of the sinus this method is ideal. The aperture is readily found by the patient for irrigation and when he lies on the affected side drainage is perfect. Siebenmann makes his opening with the little finger. Though this emphasizes the ease with which the nasal wall may be broken down in the middle meatus, it is too crude a method for exact work and in many cases the little finger can not even be introduced between the middle and lower turbinate. Onodi uses a combined pinicette and trocar designed for puncture and dilation of the opening made. This curved trocar pierces the nasal wall of the antrum in the middle meatus one centimeter posterior to the anterior end of the middle turbinated body. It is then withdrawn a little and its branches spread, an opening two centimeters long resulting. The borders of the opening are then cut away with the Hartman or oth-

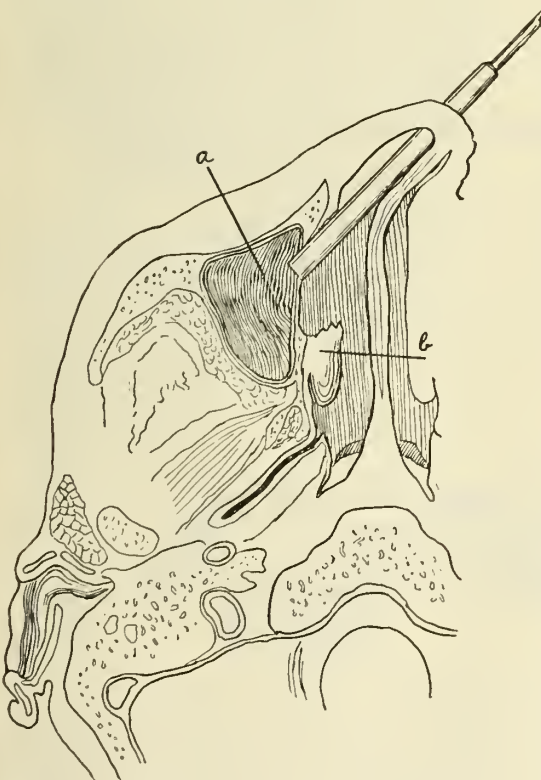


Figure 3. Horizontal section of head at level of lower turbinated body; a, antrum of Highmore; b, resected inferior turbinate. The trephine is seen entering the nasal wall of the antrum, while the tip of the nose is displaced strongly to the right.

er punch forceps until the portion of the nasal wall of the antrum between the middle and lower turbinated bodies is cleared away. The space occupied by this part of the wall is about $1\frac{1}{2}$ centimeters high and 3 to 4 centimeters long and its ablation gives a large, permanent opening for drainage and irrigation which may be easily managed by the patient. The operation may be done under cocaine anaesthesia and adrenalin and but little bleeding is to be expected. The first puncture should be made as low as possible, just above the attachment of the inferior turbinated body, for if the orbital floor be low or the attachment of the turbinate high, it might be possible in rare instances to perforate the orbit. For the same reason in enlarging the opening it is better to sacrifice a little of the upper part of the inferior turbinated body rather than to extend it far upwards. A forcible plunging of the instrument into the antrum is to be avoided lest it transverse its cavity and pierce the temporal wall into the zygomatic (pterygo-palatine) fossa.



Figure 4. Freer's barrel-shaped antrum bur.

For the acute, subacute and milder chronic cases the intranasal operation through the middle meatus is undoubtedly the best method, for it is easy of performance, inflicts but trifling injury, leaves the nasal interior practically intact, and avoids the formidable operation through the facial wall.

of the antrum, the intranasal removal of nearly the entire nasal wall is indicated; the operation advocated by Réthi (Wiener Klin. Wochenschrift, 1904, No. 34) and Claoué, (Revue Hebdomadaire de Laryngologie D'Otologie et de Rhinologie, 1903).

The following is my method of its performance. The light used is the Kirstein electric head lamp, so that, if need be, the patient may lie down during the operation, no source of reflected light being needed. Powdered cocaine is applied with a minute swab to the region of the inferior meatus and inferior turbinate and these parts are made bloodless with adrenalin. The inferior turbinated body is then cut off along the anterior $\frac{2}{3}$ of its attachment with Gruenwald's scissors and the flap severed posteriorly with a snare or small knife with angular attachment of its blade. After the turbinate has been resected the nasal surface of the nasal wall of the antrum becomes plainly visible. A straight trephine (Fig. 2) attached to the cable of the electric engine is then introduced, and its cutting edge applied

as far forward as possible against the outer wall of the nasal cavity in the inferior meatus. (Fig. 3). In order to accomplish this the shank of the instrument is pressed firmly against the cutaneous septum, displacing the nasal tip strongly to the opposite side of the face. The instrument readily and

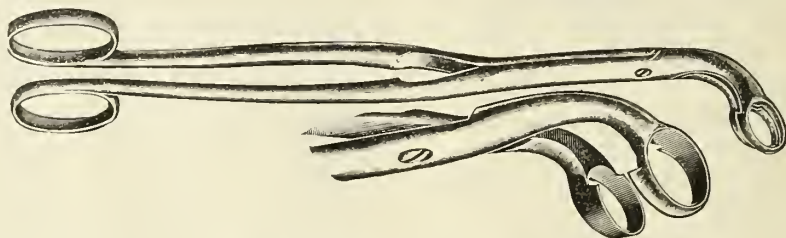


Figure 5. Rhodes' punch forceps.

The Radical Intranasal Operation of Removal of Nearly All of the Nasal Wall of the Antrum.—Where the suppuration is marked, with much foul discharge, or where the long duration of the disease leads to a suspicion of marked degeneration of the mucous lining

quickly cuts through the bone, no matter how thick, and with an unmistakable sense of its penetration into a hollow space, so that the operator is in no danger of perforating the temporal wall of the antrum under the impression that he has not yet entered the sinus.

A second and third core is then trephined out in the same manner and then nearly all of the anterior $\frac{2}{3}$ of the nasal wall of the antrum are cut away with a long barrelshaped straight bur, (Fig. 4) followed by Rhodes' large punch forceps, (Fig. 5) to trim off portions of bone not easily reached with the bur, the window made extending from about $\frac{3}{4}$ of an inch behind the apertura pyriformis in front to nearly as far back as the perpendicular plate of the palate bone behind. Below the bone is cut away with the bur to the level of the nasal floor. This must be thoroughly done so that no ledge remains between the nasal cavity and that of the sinus. Above, the window reaches to about the level of the

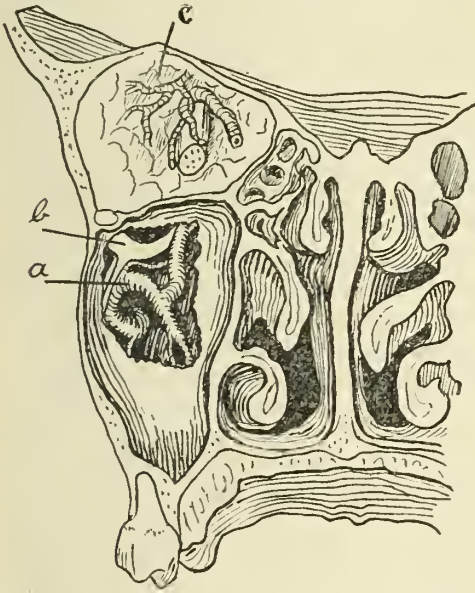


Figure 6. Vertical section across nasal cavity showing antrum with orbit above; a, arteria maxillaris interna; b, 2nd division of 5th nerve; c, orbital fat containing ophthalmic artery and optic nerve.

lower border of the middle turbinated body. The large opening made permits inspection of the interior of the antrum and its cavity may be palpated with the little finger. The large Rhodes' punch may be introduced through the window and polypi and granulations be trimmed off with it and if needed the aperture may also be used for curetting away the diseased mucosa. The cavity of the antrum and the nasal fossa are then packed with long strips of lint impregnated with subnitrate of bismuth, a packing which I use

after all of my intranasal operations, as it remains ideally aseptic for more than a week. The tampon is removed on the second day and the antrum left empty. Its interior is irrigated with boric acid solution until discharge ceases.

The only dangerous region encountered in the operation is the posterior wall of the antrum and the hindmost part of its inner wall. Behind the posterior wall (Fig. 6) lies the internal maxillary artery with the spheno-palatine artery, the arteria nasalis posterior and arteria palatina descendens branching from it. A number of cadaver operations showed me that this wall could only be injured, should the trephine plunge through too far, if the instrument were directed backward in a line at an angle with the septum of about 20 degrees. The proper angle is about 45 degrees, that is the trephine should be made to lie as nearly across the naris as possible by forcing over the septum mobile. Trephines or burrs on curved shanks I did not find necessary.

The opening should not extend backwards beyond the posterior third of the lower turbinate and one should not attempt to be too radical and cut away portions of the perpendicular plate of the palate bone lest one should possibly injure the arteria palatina descendens or by advancing high up, the spheno-palatine artery or its branches. Berens mentions arterial hemorrhage from this latter region in one of his operations by the radical method.

The burr I employ is barrel shaped like that of Curtis, (*The Laryngoscope*, 1903, p. 137), but I had it made longer, 2½ centimeters in length, so that it should not slip off from the edge of the bone when cutting. Its diameter is 4 millimeters, it has saw teeth and a smooth blunt end. Palpation is a most useful guide in doing the operation and Rhodes' punch forceps I have found better than the smaller kinds.

In the great majority of cases this operation results in a cure and does everything for the patient that may be obtained from even the most radical Caldwell-Luc procedure, and with far less traumatism. It is no bar to a later operation through the facial wall should

it become needed and has the advantage that it represents the last and most advantageous step of the Caldwell-Luc operation without its preliminary mutilation of the facial wall and mouth. In exceptional cases where the nasal fossa is so abnormally narrow that access to the nasal wall of the antrum through the nose is extremely difficult, the Caldwell-Luc operation will have to be resorted to, also where caries of bone, abscesses about the sinus or extensive complicating sphenoidal and ethmoidal disease require the freest access. Practical experience has shown that lasting injury to the tear duct is not to be feared from the various operations described that attack the nasal wall. The lower end of the duct is doubtless often cut away, but this occurrence seems to cause nothing worse than transient epiphora.

Conclusions.—The intranasal operations, both the one in the middle meatus in milder cases and the radical one of R  thi, removing nearly all of the nasal wall of the antrum, in worse ones, are to be preferred in all but a minority of the most obstinate and severe cases to the Caldwell-Luc operation and its radical modifications.

The Cooper-Meibom method of drilling into the antrum through the socket of a tooth is usually merely palliative and had better be abandoned for the intranasal operations described.

THE EDUCATIONAL TREATMENT OF NEURASTHENICS.

BY CHAS. D. CENTER, M. D., QUINCY.

The captaincy of the men of death is fought for by "the great white plague" and pneumonia. The struggle is watched by the millions scattered over the civilized earth, and the intensity of the concentration of vision causes the escape from sight of many foes less formidable to life, but equally as potent for woe as destroyers of happiness. Tuberculosis and pneumonia are open foes; they strike boldly; their moves are more or less spectacular; their blows can be felt and seen; their conflicts are Napoleonic; when

beaten they concede their defeat and withdraw from the field.

As a striking comparison to them, and easily heading the list of the creeping, insidious enemies of mankind's physical happiness and well-being, one may justly place Neurasthenia, sometimes derisively called "the great American disease." It is, in the history of pathology, what the Inquisition was in the history of Europe. It carries no bold face, it strikes no valiant blows, but works in secret, lurks unseen, tortures rather than kills, and undermines the confidence, the stability, the well-being and happiness of its victim. It is the scavenger following in the footsteps of accident, of disease, of over work and over anxiety. It is an intangible, elusive thing with which to deal, difficult to describe, and, unseen with the eye or the microscope, its presence must be told only by its ravages. As if to crown its heinous conduct it is, to quote from one author, (Church) "essentially a disorder of the energetic, productive, troubled period of life."

There is no doubt excess may be given as the cause of neurasthenia. Excess of work, of worry, of alcohol, of tobacco, of sexual indulgence, of fright, of shock, of religious enthusiasm, of study, of laziness or indolence, or of anything that instantaneously overturns nervous balance, or that little by little increasingly disturbs that equilibrium. The effect of this disturbance covers a large portion of the recognized pathognomonic signs and symptoms. There is muscular weakness, twitching, tremor, increased reflex, weariness, headache, backache, tenderness along the spine, eye change, disorder of hearing, taste and smell, indigestion, anorexia, palpitation of the heart, vaso-motor change, urinary change, sexual weakness, loss of memory, mind depression, definite or indefinite apprehension of fear, illusions—particularly those of cutaneous sensibility, of taste and smell, and of pain—unusual pain frequently described as a gnawing sensation, insomnia, non-restful sleep, troubled dreams, anaemia, *a chief obsession*, and many others. It reads like a patent medicine advertisement.

Now one peculiarity of neurasthenic symptoms is that a good percentage might be

classed as illusory, or hallucinatory symptoms. Thus, beginning with the chief obsession and adding the other apprehensions and fears, together with the gnawing pain, and some pain that is usually considered real, you can readily see how it is possible to classify the symptoms into the real and the illusory. I said "some pain that is usually considered real." All of you have had neurasthenics lose their headache, or backache, or palpitation of the heart in the course of an encouraging ten minute conversation with you. It is with the thought of these illusory symptoms in mind that I have felt justified in taking your time with this paper.

The tendency of practice today is more and more along educational lines. By this is meant that the intent, or animus of medicine is more toward prophylaxis, at the same time without receding from treatment. With this intent we have our tuberculosis crusades, our quarantine, our compulsory vaccination of children in the public schools. More than this, the intelligent patient is often taken into confidence by the doctor, who explains to him the pathologic condition, knowing that ordinary medicinal treatment will be more efficacious if he can obtain complete co-operation on the part of the patient. Mild mental cases are treated largely in an educational way, and massage, cupping, diet, baths and electricity are of as much advantage as psychic elements—or if you will allow it—as educational factors, as they are beneficial therapeutically. With your permission let me cite several selected cases of neurasthenia, giving the chief obsession, or major symptom of each, and the means used in treatment. Also to mention case by case, the result of the use of strychnine.

Case 1. Male, age 46. Confirmed neurasthenic for ten years. His mother is a neurasthenic. One brother and one sister are neurasthenics, and he has a neurasthenic daughter. His neurasthenia followed a period of excessive work, very unusual mental strain, and considerable forced loss of sleep. This patient's obsession was a fear of being alone, and of becoming over heated. For ten years he had not gone from his house to his office alone. He had practically lived out doors

in winter and in his cellar in the summer to avoid becoming over heated. After two weeks spent with intestinal eliminants, and an every other day interview to gain his confidence, he was given the syrup of the iodide of iron for a moderate degree of anemia, and instructions to drive his horse from his house to his office with a member of the family walking on the sidewalk beside him. After the third day the attendant walked one-half block behind him, and in another week the attendant was dispensed with. He now, at the end of six months, goes about alone and is the picture of health and contentment. His fear of heat was overcome partly by his being told that his tonic would cool his blood, partly by his own regained self control. This patient did better when taking strychnine than when he was without it.

Case 2. Female, age 42. School teacher. Neurasthenia probably acquired gradually over a period of about one year. Grave attack precipitated by the shock of having her school house and many of her belongings burned. Chief obsession, the belief that she was being poisoned by foul air, which she said she could smell all the time, and by the unsanitary surroundings of her temporary school building. Treatment, a daily colonic flushing with cold water, in the knee chest position. The assurance that if she would step into the open air once every half hour, and take 25 complete respirations, that she would store sufficient reserve oxygen to prevent poisoning. This patient was given strychnine so she could taste it, and did well upon it:

Case 3. Male, age 39. Bookkeeper. Case developed gradually. Supposed excess in this case, too close application to ledger. Chief obsession, the fear of killing himself, or some member of his family. He could not read the papers because he saw nothing in them but suicide, murder and sudden death. His insomnia was grave. He was given for three weeks sufficient bromide during the early evening to make him sleep. Also a digestive mixture. He was instructed to lie down for one hour in the middle of the day, to walk instead of taking the street cars, and whenever he contemplated suicide or murder to count fifty, and then go ahead and do it if he could. He reported twice a week

and each time received the assurance that there were signs intelligible to the medical eye that he was better. He made a complete recovery in eight months. Strychnine made this case worse each time it was tried.

Case 4. Male, age 30. Bank teller. Neurasthenia acquired gradually after assuming his responsible position. The money got on his nerves. Chief obsession, the fear of making a mistake, and of having someone discover his fear. He could not count a pile of \$5 notes and be sure of his count. Nerve tension was so great that the sweat would drip from his fingers. He was worried constantly by the tremor of his hands. He would awake at night, hold up a hand and if it was reasonably steady he could go to sleep again; if it shook he could sleep no more that night. Treatment, a two weeks' vacation playing golf. He was instructed to add columns of figures twice a day during this time to see if he could make a mistake. During this two weeks he lost his obsession, and in about three more months was normal. Medicinally he had a digestive mixture. Strychnine was exhibited but it invariably made him complain of more nervousness.

Case 5. Female, age 20. Daughter of case 1. Neurasthenic as far back as childhood. No discoverable obsession in the case, it being the one exception to the rule. She has had tubercular glands removed from the neck; is fairly well nourished, and is well developed. She looks tired all the time. There is partial ptosis of the left eyelid, and a high degree of astigmatism, glasses being worn to correct vision. Chief symptom, headache, which in two years treatment has grown less, due partly to correction of vision, partly to better nutrition and relief of pre-existent anaemia. Strychnine has invariably disagreed with her. There has been less improvement in this case than in any of the others. She may be what Moyer calls a congenital neurasthenic. Such an one, he says, can be benefitted but little by treatment since the neurons are born tired.

Case 6. Male, age 32. Painter. Past history covering one and one-half years. Formerly excessive user of alcohol. Chief obsession, fear of death from heart trouble.

Treatment, potassium iodide for symptoms of lead intoxication. Digestive mixture. Bromide, irregularly, in the evening. Change of occupation.

Repeated explanations of the difference between functional and organic heart trouble, with assurances that his was functional. Strychnine always disagreed with him. He made a good recovery in about six months.

Case 7. Female, age 60. Housewife, with nothing to do. A long time neurasthenic. Has had two major surgical operations to relieve her, and was made worse by each. Chief obsession, fear of Bright's disease because of pain in the back. Treatment, a written set of rules which she promised to read faithfully t. i. d., and repeat after each rule, "I believe that." These rules were merely explanations of her symptoms, each one so worded that it carried assurance of her recovery. Further treatment was by placing her in an easy, restful position, fixing her attention by tiring the eye muscles, and suggesting, for a time, that she was steadily getting better, and finally that she was well. She had seven of these sittings in two weeks, in which time she lost her obsession, regained her nerve poise, and was then continued on a restricted diet, with eliminative treatment. At the end now of five years she is still well. This case did not have strychnine.

Case 8. Male, age 24. Cigar maker. Neurasthenic for nine months. Excessive user of tobacco, as well as worker in tobacco. Chief obsession, fear of falling while walking on the street, fear induced by the feeling of vertigo, and by the sense of muscular weakness in the legs. Treatment, he was instructed to go out alone, to walk alone, and to go and walk whenever this fear was the greatest. He was assured he could not fall if he tried. He stopped work for two months, and quit the use of tobacco. He was given iron for his anaemia, and daily colonic flushings. Strychnine disagreed with him, and even now, after being well for about two months, a few doses will cause the feeling of weakness in the legs.

It is perhaps needless to say that none of these cases knew when strychnine was being used.

Case 9. Female, age 37. Housewife, with nothing to do. Neurasthenia gradually acquired, arising partly from the knowledge of the presence of a uterine fibroid, partly from the actual pain caused by its presence. A very acute exacerbation of neurasthenia followed hysterectomy. This patient complained more of the fatigue symptom than any of the other patients. Her chief obsession was fear of losing her mind. She is a very sensitive, impressionable, nervous organization, is highly educated, is musical, and has the peculiar mind bent that takes pleasure in delving in the mystic, the metaphysical and the supernatural. Treatment was entirely educational. It was repeated over and over again that her mind condition was natural following induced and abrupt change of life. She was given careful explanations of how her mental condition differed from insanity. In about four months her obsession vanished, but now, a year after her operation, she still has some of the vague physical discomfort of the ordinary neurasthenic, due partly, no doubt, to her induced climacteric.

Case 10. Male, age 42. Office man. Brother of case 1. A neuropath. Was formerly an alcoholic, and 12 years ago took the Keeley cure. Neurasthenia probably has existed for a number of years, finally reaching such a degree he could not attend to his business. His chief obsession was fear of dying, not from any particular cause, but from something. He has many times rushed into my office, fallen into a chair and gasped, "I'm dying." When this fear was on him, he would drop everything, work, engagements, anything, and start for my office, as he said "praying all the way that he might live until he reached me." His educational treatment was in openly combating every illusory thought and feeling he had. In forbidding him to talk of his case, or even to think about it. He was an exceptional patient and rather enjoyed open contradiction of his ideas and supposed symptoms. His other treatment consisted of the withdrawal of coffee, sweets, and a large portion of the starches from his diet—for he was a glutton for these things and had a persistent flatulency. He occa-

sionally gets a recurrence of a senseless dread of something for a brief time, but his obsession has disappeared, and he says he is well. He has taken strychnine in large doses with good results.

Case 11. Male, age 40. Office man. A rheumatic of rheumatic ancestry. Neurasthenia for three years. Chief obsession, belief that he had cancer of the rectum. Belief fostered by traveling quack who told him he had serious rectal trouble, and who operated, or pretended to operate, for some condition or other. Treatment, carried out by the patient, daily gradual dilatation of the sphincter muscle. Anti-lithic treatment internally. Educational treatment, reassurance of no serious rectal trouble; explanations of the absence of all signs and symptoms of carcinoma. The obsession disappeared in about two months and now at the end of three years he is well. This case was made worse and his grasp on himself was decreased by use of strychnine.

It may be said that all of these cases had some of the ordinary subjective symptoms of neurasthenia. All complained of weariness or weakness; nearly all had palpitation of the heart, headache, indigestion, constipation, anaemia, loss, or attributed loss of memory, and increased patellar reflex. But one ever complained of tremor and his attention was directed to it by his work. Two complained of cold hands or feet indicating vaso-motor change, but nearly all complained of sweating hands. All but one complained of actual pain in one or another part of the body, and all but one had a chief obsession. It was found that as soon as the patient was free from this chief obsession each one of the lesser symptoms was alleviated or removed. It must not be supposed that this chief obsession can be removed in one lesson. It is exactly like teaching a child whose mentality is decidedly below the average, and the lesson must be re-iterated again and again. The mentality is there in the neurasthenic; he may believe and understand the words you tell him at the time, but he either forgets them, or as in most cases, his psychic pessimism, which arises no doubt from neuron fatigue, is so great that he soon disbelieves. It is desirable to begin the education of a

neurasthenic two or three generations before he is born, but we do not get them then, and we must try and undo the damage done them by their grandparents, and complete the defective education, nervously speaking, given them by their parents. To quote from one author, (²Church) "A defective education that omits discipline and the cultivation of self-control, poorly fitting the child for the rude shocks of later life, may be a predisposing cause of neurasthenia."

Again, educational treatment in neurasthenia must be extended to the friends and relatives of the patient. Since we cannot maroon the patient on a lonely isle, with but a single trained attendant, the friends must be forbidden to show great open sympathy and solicitude, and must be absolutely prohibited from asking the patient how he feels.

There is no question that cases of neurasthenia are increasing rapidly. Whether this is due to our strenuous life, the competitive fight in all lines of living, or whether the Caucasian neuron is merely drifting toward degeneration I cannot say. But we must learn that drugs alone will not cure many of these cases. There is no intent to exclude medical treatment. The definition that (³Brower) "neurasthenia is exhaustion of the neuron due to defective metabolism" must carry weight, and defective metabolism may be improved medicinally. Medicine may, and should be used to relieve attendant pathologic conditions. Not only medicine in its naked sense, but diet, exercise, massage, rest, hydrotherapy and electricity as each case may need. There is no line of practice where there is greater need of versatility, of individualizing and selecting the treatment to fit the patient.

The point made by McBride in a paper read before the Wisconsin State Medical Society in 1901, is the one I wish to emphasize, i. e. the importance of getting hold of the mentality of the patient, remembering that the patient must be re-created in mind as well as body.

There is no desire to open an argument about the mastery of mind over matter, nor do I know how much a pessimistic view of life, coupled with a firm belief in some calamity overhanging one's head might fatigue and debilitate the neuron, but it is certain

that these things are factors in producing the symptom-complex known as neurasthenia and unless by the element of time, or the element of the physician's personality on the patient, or the influence of a counter shock, or impression greater than the chief obsession—all of these being really educational means—the majority of these cases will go uncured unless cured by educational therapeutics.

NITROUS OXIDE-ETHER ANAESTHESIA.

BY WELLER VAN HOOK, M. D.

The thoughtful surgeon who in the course of each year must anaesthetize many human beings is obliged to contemplate with growing horror the inevitable death list of those whose taking off is due solely to his effort to abolish consciousness for a few minutes. Although death takes place from the administration of the major anaesthetics in only one case in 3,500 to 14,000 or 15,000, even this proportion becomes after a while oppressively great and forces the operator to seek new and safer methods. I do not hesitate to say that one of the very greatest needs of surgery at the present moment is to find a simple method of temporarily abolishing consciousness, at once practical and devoid of evil consequences.

Of the principal anaesthetics, nitrous oxide and ether are admittedly the safest and their combination has long been regarded as valuable and comparatively free from danger.

No modern hospital is complete in its equipment without apparatus for administering nitrous oxide gas. It is not necessary to detail the multitude of uses to which its brief anaesthesia can be put.

Inasmuch as gas alone produces a lethal asphyxia in from three to five minutes, oxygen must be utilized when cyanosis becomes pronounced. The addition of about ten per cent of pure oxygen makes it possible to continue anaesthesia with nitrous oxide gas a comparatively long time without much risk. Unfortunately the combination makes necessary a complicated and bulky apparatus. Furthermore, the use of the two gasses is

rather difficult until the anaesthizer by practice has become expert. This difficulty renders it next to impossible to entrust to hospital assistants, whose term of anaesthetic service is necessarily brief, so complicated a duty. If, however, oxygen is admitted to the mask with air from time to time as it is needed, the apparatus demanded can be simplified to a practical point.

The apparatus which the writer uses for this purpose is the ordinary dental outfit, the face being that of Harrington.

The portability and convenience of the steel bottles containing the liquified gas and the inhaling apparatus leave but little to be desired in hospital practice. Instead of the two hundred and fifty gallon bottles used in institutional work, a one hundred gallon bottle weighing approximately nine pounds can be used in private practice.

It was many years ago that the idea was conceived of using nitrous oxide to abolish consciousness, followed by ether to maintain that state. It was early discovered that if air is admitted to the mask after nitrous oxide anaesthesia has been induced, the patient will recover consciousness to such a degree that the ether anaesthesia can be inaugurated only with difficulty, the patient often struggling violently. The ideal way of changing from one to the other of these anaesthetics is by gradually adding ether vapor to the inhaled gas. Various complicated apparatus have been invented for this purpose. They are cumbersome, delicate, difficult to manipulate or fragile. In order to render practical the use of these anaesthetics in combination, the writer has had made a simple cap to contain a piece of gauze saturated with ether, which can be applied to the nitrous oxide apparatus at the moment of making the change, so that no air will be admitted to the mask until after the patient has inhaled the desired amount of ether.

With this apparatus the writer and his associates have anaesthetized many hundred patients with satisfactory results. The combination of nitrous oxide with ether is recommended to all as a comparatively safe, practical, rapid and comfortable method of inducing anaesthesia.

NEWS NOTES.

Typhoid Fever Abating in Chicago.

One solitary death from typhoid fever in a population of nearly two millions is the notable feature of Chicago's health during the week of May 20th.

Diagnosis of this disease in the laboratory, by examination of the blood of suspected cases for physicians in doubt, promises to become a lost art, owing to lack of material. Typhoid fever is growing to be a negligible quantity in Chicago mortality—more markedly since the opening of the drainage channel.

Even the heavy rainfall of May 11—when 2.78 inches fell in twenty-four hours—failed to cause more than a temporary pollution of the water supply. This, however, was sufficient to produce a sharp increase of the acute intestinal diseases, and it is not unlikely that some increase of typhoid may also result.

When the Drainage Channel is complete in all its adjuncts, intercepting sewers, Evanston and Calumet subsidiary districts and full flow of 600,000 cubic feet per minute, only an occasional imported case of typhoid, or a still rarer one from milk, oysters or other infected food, will be left for study by the medical profession of Chicago.

Diphtheria and croup have been reduced 64.3 per cent by the introduction and persistent advocacy by the Department of the use of antitoxin, begun in 1895.

Measles, scarlet fever and whooping cough, with respective reductions of 58.9, 55.6 and 27.2 per cent, have as yet no antitoxins or other specifics for treatment; but much has been done to restrict their spread by disinfections, supervision of funerals and counsel and warning against exposure to their contagion.

Finally, the great increase of sanitary and hygienic knowledge in the community has had much to do with this cutting in half—an average reduction of 51.1 per cent—of the mortality from this group of diseases.

Sickly Octogenarians.

(From the Scottish American.)

They were neither of them brilliant scholars, but they liked to move with the times as regards their knowledge of current events, so the daily newspaper was regularly delivered at their humble domicile, and it was Jennie's duty to read out during breakfast time all the most interesting items of the day. One morning, after wading through the latest intelligence from the front, she turned to another page of the paper and said:

"Herbie, it says here that another octogenarian's dead."

"What's an octogenarian?"

"Well, I don't quite know what they are, but they must be very sick creatures. You never hear of them but they're dying."

Dr. Elizabeth Matthews of Springfield has returned from a short trip to Europe.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

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THE ROCK ISLAND MEETING.

As was expected the annual meeting at Rock Island was a distinct success. The committee had made ample provision for the sections, the House of Delegates and the exhibitors. The entertainment features were elaborate and pleasing. No stone was left unturned to insure satisfaction to those attending. That a large number were not present is no reflection on the officers or the committees. Those who remained away have much to regret.

* * *

The president's address was such a masterly effort as was to be expected from that

medical orator, Dr. William E. Quine. He commanded the close attention of his audience for over an hour and his peroration was a remarkable effort. While the fads and frailties were not spared by Dr. Quine in his address, the achievements and excellencies of medical men were commended in the highest terms. Our readers will find Dr. Quine's address in this issue of the Journal.

* * *

Dr. J. W. Pettit's address, "What we must learn and unlearn in the Treatment of Tuberculosis," was really a part of his report as a member of the special committee of the State Society on the Prevention of Tubercu-

losis. It showed that the society had placed the management of this subject in proper hands and that the great work being accomplished by Dr. Pettit at the Tent Colony at Ottawa will continue to redound to the credit of the society.

* * *

The credit given by both President Quine and Chairman Pettit to a certain official collateral agency that has been of great assistance in the educational work concerning Tuberculosis, was a delightful contrast to the efforts of certain members of this organization to discredit the work of the State Society and its committees and officers. Permanent progress in this stupendous work will be secured only when all professional agencies contribute in an unselfish manner.

* * *

Dr. Fernand Henrotin's address before the surgical section was fortunately heard by the entire membership present at the meeting. The title was "The Commerce of Surgery" and this difficult subject was handled in a most practical and common-sense manner. Dr. Henrotin did not minimize the serious nature of this malady nor was he hopeless of its remedy in the hands of the organized profession.

* * *

The election of Dr. H. C. Mitchell as president was a foregone conclusion and came as a just reward for long and faithful services as a member of the State Society and the Southern Illinois Medical Association. Nearly all the committees were continued and the subject of medical defense was given a distinct impetus by the enthusiastic reception it received in the House of Delegates.

**ACTION OF THE HOUSE OF DELEGATES
ENDORSING THE DENTAL EX-
AMINERS BILL.**

The House of Delegates on request of the committee from the State Dental Society

very properly adopted a resolution asking Governor Deneen to sign the bill creating a Board of Dental Examiners. This action is by innuendo criticized by an obscure Medical Journal in an article on the veto by the Governor of the appropriation for the consumptive hospital. Had the House of Delegates had the slightest intimation that the Governor was unfriendly to this appropriation, action urging him to approve of this appropriation would have undoubtedly been taken. The Journal in question and its backer, seem to have an unexplained antipathy towards Boards of Examiners for the professions. Why the powerful political influence these gentlemen claim to possess was not used in behalf of the appropriation for the consumptive hospital we are not told.

DR. PETTIT'S ENDORSEMENT.

Probably the most far reaching action taken at the Rock Island meeting was the endorsement of Dr. J. W. Pettit for the position of secretary of the State Board of Health. This unusual action of the representatives of the organized profession was made necessary by the distressing conditions existing at the present time. The members, cognizant of the real state of affairs, have long realized that a change was necessary and took the first opportunity after the inauguration of a new administration to urge the appointment of Dr. Pettit, who has the confidence and respect of the entire profession and who will, when appointed, bring about a noteworthy betterment in the conduct of that office.

INDEX TO VOLUME VII.

Volume Seven of the Journal closes with this number but owing to the great volume of work incident to the close of the Legislature, the Journal Company is unable to print it at this time without greatly delaying the issue of the Journal. It will therefore be found with the July issue. The six issues

of Volume VI will be found to contain nearly 200 pages of original reading matter. This is about as much reading matter as the ordinary Medical weekly prints in a half year and is as much or more than the ordinary monthly Journal prints in an entire year. Hence the desirability of having two volumes each year.

NOTICE TO SECRETARIES OF LOCAL SOCIETIES.

We are asked by several of the Councilors to request the Secretaries of County and District Societies to inform the Councilor of the District of the time and place of each of the meetings of the Societies. The Councilors being thus informed hope to meet frequently during the coming year with the Societies in their districts.

VETO OF APPROPRIATION FOR THE CONSUMPTIVE HOSPITAL.

One of the surprises connected with the last session of the Legislature was the veto, by Governor Deneen, of the very small appropriation of \$25,000.00, provided by the General Assembly for the establishment of a consumptive hospital.

Governor Deneen had apparently expressed considerable interest in this project and we stated in our last issue the belief that he would probably sign the bill. The Governor apparently selected this, as in his judgment, one of the least pressing of the needs of the diseased and unfortunate inhabitants of the State.

The fact that he took this action shows that the agitation upon this subject, while it has been considerable, still has not been great enough to create an impression as to its necessity. Education upon this matter of course is not so necessary among medical men who appreciate its great importance as it is among the laity who are just beginning to realize what the modern treatment of consumption accomplishes.

The responsibility, in part, at least, lies

with the Legislature, it having appropriated money for all sorts of purposes, moved by sentiment or self-interest.

Let us hope that all the world's fairs and state expositions requiring expensive state buildings will have been held before another session and that all the monuments will have been provided for by that time so that the next Legislature will feel free to appropriate money for a purpose which will eventually do more good than any equal sum appropriated for any other purpose since Illinois became a state. In the meantime, let us keep up the agitation so strong that a sum of not less than \$200,000.00 will be appropriated two years from now.

News Items.

Dr. S. A. Waterman of Auburn Park has gone abroad until September.

Dr. Y. Davis of Wapella was shot in the back by Mr. Truman Mason. Mr. Mason later committed suicide. The trouble grew out of a personal injury suit instituted by Dr. Davis against Mason.

Dr. Henry Wohlgenuth of Springfield celebrated his 83d birthday May 22 and formally retired from the practice after a career embracing nearly 60 years. Dr. Wohlgenuth located in Springfield in 1845. He graduated from the Eclectic Medical Institute of Cincinnati in 1854. He was born in Hanover, Germany.

When in Doubt.

Johnny—"Pa, do they always have an inquest when anybody dies?"

Wise Pa—"O, no, my son. When a doctor has been attending a person there is no need for an inquest. It is only necessary where there is doubt as to the cause of death."—Boston Transcript.

The National Association for the Study and Prevention of Tuberculosis held a meeting at Washington, D. C., May 18. In his opening address Dr. William Osler said:

"In spite of its frivolity, in spite of its size, in spite of its—other things which I hesitate to allude to, New York has set the pace in legislation, institutions, and treatment of tuberculosis."

He declared education regarding tuberculosis was the thing to strive for. He discussed this feature under three heads: Education of the

public, of the physician, and of the patient. The public, he said, was awake, but sitting on the edge of the bed and not yet dressed. In this awakening, however, he asserted much had been accomplished over past conditions. When the public got dressed he predicted that much activity would follow and much would be accomplished toward stamping out tuberculosis.

The education of the medical profession, he said, needed immediate and careful attention. Too little attention is paid to the disease in its incipient stage.

Lastly, the education of the patient himself is of prime importance. A doctor should not hesitate to inform a patient at once of his true condition and should give the necessary data to the treatment, climatic conditions, and mode of life to be followed without restriction.

Dr. G. F. Lydston Upholds Divorce.

In his address before the Iowa State Medical Society, Dr. Lydston said: "Divorce is a fortunate provision, affinity is nonsense, and the legalized marriage does not make it a divine contract."

The Chicagoan also advocated a physical appeal to men and women. He urged this as preferable to the moral and the legal control, arguing that a degraded man or woman had no moral sense and could be more readily reached through appeals to the physical.

"The idea of supposing that a man's judgment is infallible when it comes to marriage," said Dr. Lydston, "is a mistake. Why, it may turn out that either the man is vicious or the woman ill-tempered. And these people raise a family. Do such people have the right kind of children? There is no such thing as affinity. That's all nonsense."

CHICAGO ITEMS.

Dr. and Mrs. James C. Gill, 833 Warren avenue, sailed for Europe recently.

Dr. Laura C. Bates, wife of Dr. H. O. Bates of Long Beach, Cal., formerly of Chicago, is here visiting her sons, Dr. Morley D. Bates and Dr. Carl D. Bates, and their families.

Dr. Mary Weeks Burnett sailed recently to spend the summer in Europe with her daughter, who has been sojourning in India and the orient for some years.

Dr. and Mrs. F. C. Hotz and family, 600 Dearborn avenue, have gone to their summer home, the Pines, Morton Grove, where they will remain during the heated term.

Dr. and Mrs. P. J. H. Farrell and children, 443 Elm street, have gone to their summer residence at East Elmira, N. Y., where they will remain until fall.

Dr. Julia Ross Low has removed from Chicago to South Berwick, Maine.

Dr. E. P. Murdock of 100 State street, Chicago, has been elected medical director of the Illinois G. A. R.

Dr. and Mrs. Joseph W. Wassall, 444 Chestnut street, have gone to Hartsdale, N. Y., where they have taken a house for the season.

Dr. and Mrs. Henry Hooper 541 North State street, will leave about June 25 for a trip to Bar Harbor and Deer Island, Me., and later will go to the Huron Mountain club in Michigan for the balance of the summer.

Dr. Robert H. Babcock has removed his residence to the Hotel Virginia, telephone N. 1692. His office remains at 92 State street. Hours from 1 to 4 p. m. Telephone Central 4900.

Dr. Walter A. Jaquith of 5700 Indiana avenue, Chicago, President of the Chicago Medical Examiners' Association and Professor of Physical Diagnosis at the Post Graduate Medical School, will resign these positions and remove to Newark, N. J., June 1, where he has received an appointment on the medical staff of the Prudential Insurance Company. A dinner in honor of Dr. Jaquith was given at the Union Restaurant May 23 by the Prudential Medical Examiners' Association which was largely attended.

Strenuous Life of Dr. DeVere.

Life at the residence of Dr. Joseph G. De Vere, 1145 Western avenue, has been a continual warfare between husband and wife, according to the bills filed by the two. Mrs. De Vere brought suit for separate maintenance March 10. Her husband replied with a cross bill asking an absolute divorce, and now Mrs. De Vere has answered the latter. All the instruments allege cruelty.

Dr. De Vere coolly informed his wife, according to the petition of the latter, that he would "smash her brains out and wipe his feet on her body," and then would "get somebody to suit him."

Mrs. De Vere attacked her husband, he asserts in his bill, with a medicine chest, books, chairs and a tea kettle, at last arriving at a hatchet with which she threatened to "split his head open." He says he was forced to flee to the neighbors for refuge.

Judge Kavanagh has issued an injunction restraining the physician from disposing of his property and practicing cruelty toward his wife.

Civil Service Rating of Physicians at Dunning.

The county civil service commission have announced the results of the recent examination for senior physicians at the Dunning institutions. The following were placed on the eligible list:

Nervous and mental diseases—Drs. Joseph M. Kearney, Hospital for Insane at Elgin; Ralph C. Hamill, 294 LaSalle avenue; Ernest S. Moore, 291 Ashland avenue; Groesbeck Walsh, 306 Superior street; Benjamin Landau, Dunning; Clara Dunn, 403 South Lincoln street; Julius F. Wen Gleski, 5226 Indiana avenue; Goodrich Snow, Princeton, Ill.; I. G. Blackmer, Dunning.

Tuberculosis—Ernest S. Moore, 291 Ashland boulevard; Benjamin Landau, Dunning.

Medicine—Ralph C. Hamill, 294 LaSalle avenue; Benjamin Landau, Dunning; Goodrich Snow, Princeton, Ill.; Julius F. Wen Gleski.

Chicago Medical Society.

The Medical Society of Cook County, Regular meetings are held every Wednesday evening from October to June at the Chicago Public Library Building, Randolph Street Entrance in the large hall on the ground floor toward West end of the Building. Membership 1512.

OFFICERS:

J. B. MURPHY, 100 State StreetPresident
FRANK X. WALLS, 4307 Ellis AvenueSecretary
A. E. HALSTEAD, 2937 Indiana Avenue.....Treasurer
W. A. EVANS, 103 State Street.....Chairman Medicolegal Committee
WM. HARSHA, 103 State Street.....Chairman Membership Committee

JUNE, 1905.

CHICAGO MEDICAL SOCIETY.

A regular meeting was held April 5, 1905, with the President, Dr. John B. Murphy, in the chair.

Dr. Jos. Breunemann exhibited a premature infant.

The case was discussed by Drs. Jacob Frank, H. F. Goodwin, and the discussion closed by Dr. Brenneman.

Dr. James B. Herrick reported a case of intermittent claudication.

Dr. Hugh T. Patrick reported a case of intermittent claudication, and exhibited the patient.

Discussed by Dr. John B. Murphy and the discussion closed by Dr. Herrick.

Dr. Joseph L. Miller exhibited a case of gout with myelogenous leukemia.

Dr. R. B. Preble showed two cases illustrating multiple neurofibromata.

Discussed by Dr. A. L. Freund.

Dr. Ugo Biffi (by invitation), director of the Hygienic Institute of Lima, Peru, read a paper and showed photographs of diseases peculiar to Peru.

On motion of Dr. Wm. A. Evans, a vote of thanks was extended to Dr. Biffi for his instructive and interesting paper.

Exhibition of a Premature Infant

My purpose is not so much to show a premature infant as it is to demonstrate what can be done under ordinary circumstances with these difficult cases that are so often looked upon as hopeless.

This child is now 3½ months old, weighs 6 pounds, and gives every evidence of sound health and rather unusual solidity of tissues. From the mother's menstrual history, the baby's birth weight of 3 pounds, its length, development, skin transparency, and general marked fetal appearance, one can properly place the period of intra-uterine life at 7 months. An incubator and woman's milk are usually considered essentials under such circumstances.

Neither was accessible at the time, so the baby was wrapped in cotton and blankets, was surrounded by hot water bags, and from the start was fed on completely peptonized modified cow's milk mixtures of whey, cream, cereal waters and milk sugar. At first equal parts of whey, barley water and sterile water with milk sugar (four per cent) were given every hour in teaspoonful feedings. Cream was added slowly, a teaspoonful in 24 hours feeding at a time, at varying intervals. The amounts and intervals between feedings were soon those of a full term normal child at birth. It is now getting 3 ounces every two hours of a modified milk mixture containing 3+ of fat, 1¼% of proteid, and 6½% of lactose. The child has never had a sick day, and only once, for a period of four or five days, were its bowels disturbed, because of an unintentional increase in the amount of sugar to 10%. During the first three weeks, as is the usual rule, the child lost in weight, until it reached 2 pounds 9 ounces. Since then it has gained steadily, making an average gain of 4½ pounds a week. Its present excellent state of nutrition and of health is best shown by the child itself.

It is a great pleasure to be able to show a case in which one can demonstrate in a tangible form the very satisfactory results that one can confidently expect to obtain with our modern methods of infant feeding.

Discussion on the Case of Dr. Brenneman.

Dr. Jacob Frank: I would like to ask Dr. Brenneman if he knows anything about the longevity and growth of premature children, and whether there are any statistics on record as to longevity and growth.

Dr. Brenneman (closing the discussion): With reference to the question of Dr. Frank as to the longevity of these premature infants, I will say that I know nothing about it, nor do I know anything with reference to their stature at a later time. I do not know whether there are any statistics on this subject or not.

With reference to the question of Dr. Goodwin, I will say that my experience has been rather limited in reference to such additional methods of feeding as he has referred to, namely, inunctions of oil. However, I have not found them of very much use as food. In almost all of these cases, if one can get them to take anything the other way, it is of so much more value than what we can get by means of inunctions. The more experience we have in cases of this sort, with percentage feeding, the fewer are the cases that do not yield to this alone. I have had myself practically no beneficial results that were traceable to inunctions or any of the methods mentioned.

CASE OF INTERMITTENT CLAUDICATION.

By James B. Herrick, M. D., Chicago.

The patient I had hoped to present this evening was in such a condition that it was impossible for me to bring him before you, but Dr. Patrick has a case that he will show to you, and it will enable me to say a few words concerning the patient I had hoped to exhibit.

My patient showed the typical symptom-complex that is spoken of as intermittent claudication, that is, intermittent limp or lameness, which occurs when the patient walks a greater or less distance. He is a Hebrew, 45 years of age, who a little less than two years ago noticed that on walking he had stiffness and pain in the calf of the right leg, and also some pain in the right foot. He was obliged to stop walking and to rest for a short time, after which he could continue walking again. A little later than that he noticed a change in the color of the feet on walking. After walking a short distance the right foot would become pale or, "as white as a sheet of paper," as he expressed it. He suffered a great deal of pain under these circumstances. Four months later he had similar symptoms in the left foot. The pain annoyed him not only on walking, but on change in the position of the foot, particularly if it were elevated, so that we may assume the blood did not circulate as freely in the foot as it should. The pain became worse, and finally, when he came under my care, two months ago, he was suffering pain paroxysmally, even when he did not walk, or even at times when he was quiet in bed.

There is one other thing I would mention, and that is, about three months ago a small ulcer appeared just at the inner side of the nail of the right great toe, which gradually increased in size and was the seat of more or less burning and pain, which later the patient described as almost unbearable. A smaller ulcer appeared under the nail of the little toe of the right foot. The ulcer on the great toe kept increasing in size, until the pain finally became so unbearable that a few days ago an amputation was made of the great and little toes. This relieved the pain somewhat, but the patient has suffered a great deal since, and it is on account of the suffering that he refused to come down tonight and show himself. The wounds also are not doing as

nicely as they might. The edges of them are sloughing.

The symptom-complex of intermittent claudication was first described by Charcot, in 1859, in the human being. It is illustrated in the patient whose history I have presented. That is, the patient on walking experiences pain in the calf of the right leg, with stiffness in the calf of that leg and pain in the foot, so that he continues to walk with a limp. The other symptom was extreme pallor of the foot on walking. When we come to examine these patients, as in the case of the patient whose history I have just related, it is rare to find a pulsating artery in the foot. Examining below the external malleolus, or in examining the dorsal artery of the foot, it is rare that one can feel the artery pulsating. Neither one of the arteries of the foot of my patient could be felt in any position, and several physicians examined the patient repeatedly.

I desire to call attention to the fact that in this case no sclerotic change could be made out, either in the foot of the leg or of the arteries of the wrist. The heart was not enlarged, and there were no physical signs of sclerotic changes in the aorta or in the coronaries. He had had one slight attack that might possibly be construed as an angina pectoris. It is interesting to notice that these cases of angina pectoris depend, the majority of them at least, on sclerosis of the coronary arteries. In my patient's case the arteries could not be made out as sclerotic. It is noteworthy, however, that at the time of the amputation, no hemostats were necessary. There was merely a trifling oozing of blood. The pallor of the skin which the patient described on walking could be clearly seen. If we elevated the foot, it would become as white as a sheet of paper, and at the time these circulatory disturbances were prominent the patient complained bitterly of pain.

So far as the pathology of the condition is concerned, I believe Erb was the first who did very much in this line of work, and who was inclined to limit it strictly to arterio-sclerotic cases, and we shall speak of intermittent claudication as an angio-sclerotic affection. In six cases described, distinct angio-sclerotic changes have been made out in the vessels, and in his last article Erb states that he has seen over forty cases. He admits, however, that in a few of them no demonstrable sclerotic changes could be made out, and in some he is positive that the circulatory disturbances were of an angio-sclerotic character. This is in harmony with the views advanced by Oppenheim, who declares that in some cases an angio-spasm rather than an angio-sclerosis is to blame. There are circulatory disturbances in the nerves; also in the muscles, etc. These are believed to be the pathologic basis of this condition, and Charcot believed that when the patient attempted to walk, the over-demand made for a flow of blood could not be met by a partially sclerosed and partially obstructed vessel, and therefore pain was complained of.

In this case, as in several others, local gangrene or death of the part, such as the skin and

some of the deeper structures, has occurred. There are definite and unmistakable trophic disturbances as well as circulatory and vaso-motor, and it is certainly not an easy matter to draw the line between the condition I have described and true Reynaud's disease. If we add to these circulatory and vaso-motor phenomena, trophic disturbances, we have something that closely approaches Reynaud's disease. Certainly in the case I had, considering the appearance of the toe and the painful phenomena, I could not deny that it resembled closely Reynaud's disease, even though in Reynaud's disease we do not have obliteration of the arteries, and even though in Reynaud's disease there are perhaps in the majority of cases phenomena in the tips of the fingers, tip of the nose, ears, etc.

These are the main points that are to be brought out in connection with my case, and I shall ask Dr. Patrick to enlarge upon them when he shows his case.

I wish to say a word about the treatment in this case. Blood pressure was low. In one radial the pulse was less than 100, using the Riva-Rocci instrument to measure it. In the other it was 110. Strophanthus was used in large doses. Digitalis, even though it contracts the peripheral vessels, was used in combination with nitroglycerine, adrenalin and the nitrites. Warm foot baths have been used, but absolutely nothing has relieved the patient's pain except morphine, which has been absolutely necessary. Amputation of the toe was done at his urgent solicitation. He really wanted the foot cut off, and that perhaps will have to be done, but nothing in the way of treatment has seemed to give him any relief whatever.

INTERMITTENT CLAUDICATION.

By Hugh T. Patrick, M. D., Chicago.

This patient came in from Montana after I had received a program of this evening's meeting, and I thought it such a beautiful example of this disease that it would be a pity not to bring him here for you to see.

The man is 36 years of age. He gives no specific history whatever, but has received large doses of mercury and iodide of potassium. The first symptom appeared four and one-half years ago, in the form of a small short streak of inflammation in the left thigh. I suppose that it was a phlebitis, although I do not really know, because I have had no adequate description. There was an area about two inches long and very narrow that was quite painful, but this disappeared in a couple of weeks. The same thing occurred in the right thigh. He had nothing more of the kind for a considerable time, during which period he was well. He is a merchant by occupation, and felt nothing out of the way until about three years ago, when he had a recurrence of this suppurative phlebitis, which confined him to bed for a time. After the fourth attack of this suppurative phlebitis he noticed the first symptoms of intermittent claudication. He could start to walk briskly, his legs felt strong, but very soon they became exhausted or very weak, so that he would have to stop; and he told me that what seemed to him sur-

prising was that if he would sit down and rest even for half a minute he could resume walking with comparative comfort again, for a short stretch, when he would again have to rest. A year ago there appeared a small ulcer between the fourth and fifth toes of the left foot, which was very slow to heal. About the same time there appeared between the fourth and fifth toes of the right foot a sore, which was larger. This did not heal, although he applied all manner of household remedies. Finally a surgeon thought it would be a rational surgical procedure to curette this ulcer thoroughly and bandage it up. He did so, and when the bandage was taken off the sore was larger than it had been. Still it would not heal. Then, there was presumably some infection. Two of the toes were amputated, and when the bandage was taken off after amputation it was found the flaps had not united. There was no sign of healing. Some more tissue was cut off and again, when the bandage was removed, there were no signs of union in the flaps. Some stitches were put in, with the hope of closing the wound, but it would not heal. Finally the foot was amputated and that time the flaps united but very slowly, and there was an ulcerated surface left for many months. He has still intermittent claudication, which is not much worse than it was a year or two ago. I will have him walk down the aisle for you to see. You will notice that he can start fairly well. I had him hop up and down on one foot in my office, and he hopped about thirty feet fairly well, and then he could not go any farther. I call your attention to the color of the foot, when he takes his shoe and stocking off. In the beginning it was white. The slight pressure of the shoe and stocking squeezed out all the blood. He did not want to take his shoe and stocking off because if the foot gets cold it is very uncomfortable. When he hops all of the venous blood appears to be forced out, and there is not sufficient arterial blood coming in to retain the color of the foot.

As in Dr. Herrick's case, pulsation of the arteries in the lower extremity are not to be felt below the groin. You will observe that after pressure the circulation is very slow in coming back, and if the femoral artery be compressed in the groin, it will be about two minutes before the little white spot where I press my finger becomes pink, showing that the circulation is very poor indeed.

Aside from the legs, examination of the circulatory system is practically negative. The femoral arteries feel small and rather hard, but they have not the nodular, uneven feel of ordinary sclerotic or atheromatous vessels. His pulse at the wrist is compressible. The heart is normal, and otherwise I believe he is all right.

Let me say a word or two regarding a method of treatment, which I have mentioned to the patient. I refer to the recent treatment of Reynaud's disease, hit upon independently by Cushing, of Johns Hopkins, and by Dr. Moyer of this city, which consists of the application of a bandage or constricting band. Cushing was led to it because he had noticed that after application of the Esmarch bandage there was vaso-

motor paresis and the vessels became over-full of blood. He tried it in Raynaud's disease. An elastic bandage is applied around the extremity sufficiently tight to constrict the veins but not the arteries. I have hesitated to recommend this treatment, inasmuch as the patient is going back to Montana to-morrow, because if the bandage were applied a little too tight and left on a little too long, it would be a very easy matter to get up a thrombosis of one of the large arteries in his leg, as the femoral, with resulting gangrene; a very unpleasant consequence for patient and physician. But I think that with sufficient care the method might be tried, with the idea of dilating the vessels to a certain extent. But whether it would be successful or not is problematical, because the *modus operandi* of the disease in these cases, as Dr. Herrick has indicated, is decidedly obscure. One of the reasons why I am afraid of compression of the arteries is this: Compression of the carotids is one of the best possible diagnostic means or aids in senile epilepsy. It is not at all difficult in many cases of senile epilepsy to induce a fit by compression of the carotids; a method which was exploited some years ago by an Italian physician, who dwelt at great length and with considerable emphasis upon its value, and incidentally remarked that in one of his cases he was unfortunate enough to cause arterial thrombosis in the brain causing permanent hemiplegia. I have used that method a few times, but have always done it with a sort of "gone" feeling in the epigastrium, for fear I might have a repetition of that physician's experience, and it was that idea which lingered in my mind when I hesitated to recommend compression of the limb in this case.

Discussion on the Cases of Dr. Herrick and Dr. Patrick.

Dr. John B. Murphy: I would like to ask some questions. First, as to the presence or absence of sugar in the urine at any time in the history of the case reported by Dr. Herrick.

Dr. Herrick: There was none.

Dr. Murphy: Second, I would like to ask as to the condition of the arteries. If I remember rightly, you spoke of an angio-spasm at the time of the amputation of the toe and that the operation required no hemostats to control the hemorrhage. Where was the amputation made?

Dr. Herrick: Just about the foot.

Dr. Murphy: The angio-spasm does not seem to affect the arteries to the extent of interfering with their power to emit blood during amputation. I recently saw a patient with the symptom of intermittent claudication, a man 32 years of age, who complained of pain and fatigue in walking for only a few weeks before he appeared at the hospital. He was admitted to Mercy Hospital December 29, 1904, suffering from pain and swelling in both of his feet. Examination showed that he had gangrene up to the middle of the right leg. The lower half of the left foot was swollen and edematous, with a small area of dark discoloration on the plantar surface. His urine was examined for sugar that night, shortly after he was admitted to the hospital, and sugar was found. The doctor who ex-

amined him the night previous to his admission to the hospital was unable to find sugar, and there was no sugar at any time subsequently to the operation in the urine. Erythrocytes, 5,-280,000; leukocytes, 9,200. A week or ten days later we amputated the leg above the knee and it required only one ligature, that on the femoral artery. He had extreme endarteritis of the popliteal, hyaline degeneration, round cell infiltration of media, thrombus formation. The left leg looked as though it was certain to become gangrenous, and on account of a discoloration that appeared on the sole of the foot at the end of 24 hours, I thought the limb would have to be amputated. However, the swelling disappeared, the limb was anemic for a number of days after the foot had been elevated and it finally regained its natural color. It became normal, although no arterial pulsation could be detected in the ankle or foot.

We had two other conditions, one spasm anemia and the other compression of the subclavian artery, as in the supernumerary cervical rib cases, one which Dr. Patrick showed a short time ago, and which was such a conspicuous symptom in the case I operated. We have the same condition in spasm of the vessels in patients who come to the surgeon for a preliminary examination, where the hand has been exposed or put in cold water, causing an anemia as profound as anemia due to compression of the vessels. In other words, one a condition from the spasm and the other from anemia from compression of vessels. In the case amputated there was no evidence of arthritis, myocarditis or arterio sclerosis, radial pulse not easily compressed popliteal and general pulsation normal on left side. He has a very pronounced fatigue in walking on left leg since the operation.

Dr. Herrick (closing the discussion): In regard to the questions asked by Dr. Murphy, I will say that in the case I have under observation repeated examinations were made for sugar in the urine, and none found. I do not know how many examinations were made after the patient was admitted to the hospital, but no symptoms resembling those of diabetes were found. He was examined by one or two physicians outside, and sugar was not found by them. In some cases, however, with the symptom-complex of intermittent claudication, diabetes has been present. In Erb's article he mentioned two or three cases in which distinct diabetes were present.

The cause of the circulatory disturbance may be varied. It is believed that it may be due to spasm, or is it due to sclerotic or endarteritic changes, but in some cases, and, strangely enough, in Charcot's first case, it was due to obstruction from traumatic aneurysm. The man was shot, or had received a punctured wound in the left side of the abdomen, and there was a traumatic aneurysm of the iliac. There was a partial obstruction of the circulation in that one leg, and the symptoms of intermittent claudication made their appearance. Nothnagel has described cases similar to this of intermittent circulatory disturbance in the upper extremity that apparently resemble the one Dr.

Murphy spoke of as being due to a cervical rib.

In speaking to a surgeon the other day regarding this particular case, he said he remembered that the late Dr. Gunn, in lecturing on Potts' toe and senile gangrene, spoke of what he called the leg tire that these patients experienced. Perhaps Dr. Murphy remembers that. These patients with senile gangrene and arterio-sclerosis complain of weariness in the legs. They give out, and they speak of it as leg tire. He looked upon it as the forerunner occasionally of gangrene of the toe.

An interesting fact which neither Dr. Patrick nor I brought out is the one that a large percentage of these cases of intermittent claudication have been seen in the Hebrew race. Why that is is not perfectly clear. It has been thought by Erb that the excessive use of tobacco by the Hebrew, particularly cigarette smoking, might be accountable for the arterio-sclerotic changes. Both Dr. Patrick's case and mine belong to that race.

Discussion on Dr. Preble's Case.

Dr. A. L. Freund: I would like to ask Dr. Preble whether the emaciation shown by these patients is due to the presence of these numerous tumors. I had a case of this disease, some years ago, in a man somewhat advanced in years, who was very much emaciated, and the tumors were similar in size and number to those noticed in the older of these two patients, and, as Dr. Preble has stated, the fibromata produced no appreciable symptoms; in the case that came under my observation, so far as I could learn, they did not affect the health of the patient. The man underwent a severe surgical operation quite late in life, and made a good recovery. See page 388 for Dr. Preble's paper.

At a meeting of the Chicago Medical Society, held April 12, 1905, the following papers were read:

1. The Choice of Ether or Chloroform, Methods of Administration, Dangers and After-Effects, by Dr. H. D. Peterson.
2. Spinal Anesthesia, by Dr. A. E. Halstead. See page 389.
3. Scopolamin-Morphin Anesthesia, by Dr. Emil Ries.
4. Nitrous Oxid Anesthesia, by Dr. Weller Van Hook.
5. Nerve Blocking and Cocaine-Adrenalin Anesthesia, by Dr. Wm. E. Schroeder.

Discussed by Drs. Rosalie M. Ladova, E. W. Ryerson, J. R. Pennington, J. B. DeLee, O'Neill, Wm. H. Wilder, A. Goldspohn, A. Belcham Keyes, Bertha Van Hoosen, Robert J. Gay, Peterson, H. M. Richter.

GENERAL ANAESTHETICS, ETHER AND CHLOROFORM.

By H. D. Peterson, M. D.

The relative value of any anaesthetic depends chiefly upon its safety. Its safety is measured by, first, its toxicity and whether it is a stimulant or depressant. Second, the experience of the administrator.

Physiological experiments have demonstrated that chloroform is a cardiac depressant, is toxic in its action, and lowers nerve energy.

Ether, on the contrary, is a stimulant to the heart muscle and is less toxic and depressant to the system generally than chloroform.

Statistics given by Hare show the death rate of chloroform anaesthesia to be 1 in 3162, while that of ether is 1 in 16302. It is therefore a logical conclusion that as a general anaesthetic for all purposes, in the hands of skilled and inexperienced administrators, ether is more than five times as safe as chloroform.

Ether is safer than chloroform for the following reasons:

First, it gives warning in ample time to avoid serious results, consequently death from ether is almost invariably due to carelessness or inexperience on the part of the anaesthetist.

Second, its deleterious effect is chiefly upon the respiratory centers rather than upon the heart, and respiratory embarrassment is more amenable to treatment than cardiac.

Deaths from chloroform occur in three ways, and nearly always in the first stage. At the beginning of the anaesthetic administration there may occur a sudden spasm of the chest muscles causing a rise of intra-thoracic pressure and venous congestion follows. A deep inspiration may now follow and the blood in the lungs is heavily charged with chloroform vapor. The heart now receives this fresh supply of blood and it being laden with chloroform vapor the heart muscle is at once paralyzed by the toxic action of the chloroform and dilation and engorgement follow. (Hare's Therapeutics, Vol. 3.)

If the death comes later in the anaesthesia it is due to the poisonous effect upon the brain centers, the vaso-dilators allowing the capillaries to become engorged and the patient bleeds to death in his own blood vessels.

The third manner of death from chloroform is by paralysis of the respiratory centers. In the hands of an expert, chloroform may be free from many of its dangers but under the same conditions, ether is safer.

No anaesthetic should be given without careful watching of the patient, but as ether anaesthesia does not require so close attention to the patient as does that of chloroform, and as most anaesthetics are given by those of limited or no experience, it follows that ether is the safer anaesthetic of the two.

Choice of Anaesthetic.

This must be guided by the time consumed in the operation, the physical condition of the patient and the experience of the anaesthetist.

A statement by H. C. Wood that "so dangerous is chloroform and so safe is ether that there is no excuse for the use of the former under ordinary circumstances" has much of truth in it. If the operation is of short duration, chloroform may be used, as by its more rapid action the patient is not subjected to so much shock as by a more prolonged anaesthesia with ether, but there are other anaesthetics safer than chloroform which may be used in short operations.

The condition of the patient may indicate or contra-indicate the use of one anaesthetic in preference to another. The experience of the anaesthetist should have much to do with deciding what drug should be used.

Indications and Contra-Indications—Ether.

Pulmonary diseases (bronchitis, emphysema, tuberculosis), chronic Bright's, arterio sclerosis are said by some to be contra indications for ether anaesthesia. When properly given these objections do not hold good.

In cases where bronchitis is present the irritation to the mucous membranes is said to be more marked when ether is used than when chloroform is the anaesthetic. My personal observation is that there is not quite so much.

Emphysema and tuberculosis of the lungs and arterio-sclerosis are not contra-indications to ether, but extra caution should be used.

While the kidneys eliminate ether, it has been shown by recent research¹ that the ill effects produced by it upon the kidney is only temporary if at all. In fact such trouble is in many cases due to an infection previously existing in the system.

Chloroform.

There are many reasons why chloroform should not be used in certain cases. Among these are shock, as if from accident, in which the vital energy is lowered and chloroform would still further depress. A heart weakened in its muscles or valves is an unsafe condition for chloroform.

The Experience of the Anaesthetist.

Ether should be the anaesthetic for the beginner, as chloroform is unsafe in the hands of the inexperienced. The claim advanced by some surgeons that in laparotomy chloroform anaesthesia produces better relaxation of the abdominal muscles than does ether is not proved. If any rigidity occurs it is because the patient is not surgically anaesthetized. The conclusion is that for the majority of cases in which general anaesthesia is required ether and chloroform are the only ones to be used in prolonged operation and that ether is preferable.

Methods of Administration.

Since anaesthesia by ether requires the inhaled air to be mixed with at least 80 per cent of the vapor, while anaesthesia by chloroform requires air having but 5 per cent of the vapor, it is plainly seen the methods of administration of the two drugs differ from each other.

Ether should be always be given by the closed or nearly closed method. By this I mean the use of a cone which nearly excludes the air. The best form, to my knowledge, is the Allis inhaler, which if properly made allows the bandage strips with which it is wound to come closely enough to each other to allow but a small current of air to pass through and does not allow ether to drop upon the face of the patient and allows continuous application. An improvised cone made of card-board and filled with cotton serves equally well.

Chloroform should invariably be given with a plentiful admixture of air, sudden inhalations of air heavily charged with chloroform vapor are very liable to produce syncope and death. A simple mask or handkerchief is sufficient.

Technique.

The preliminary routine, examination of urine and physical condition of the subject hav-

ing been made, the anaesthetist should seek to gain the patient's confidence, which is of extreme importance, as the excited stage may be shortened or prevented and less anaesthetic is required. Fear of being rendered unconscious by some drug in the hands of another often works against the best results in anaesthesia. Especially is this true of children, and by assuring such subjects that no injury is intended we have gained an advantage.

The cone should be placed over the mouth and nose without any ether upon it and the patient told to breathe naturally. After he is accustomed to the cone a few drops of ether are added in order that he may become used to the vapor and also because by beginning with a very small quantity his fear is done away with and some of the objections urged against ether are thus avoided, viz.: coughing, strangulation, irritation and burning sensation of mucous membranes of nose and mouth.

At first the patient becomes flushed, especially about the neck, and a little later excitement may follow, but by skillful administration this period can be very much shortened and the quiet which follows is soon superseded by complete relaxation and surgical anaesthesia. Here again the experienced anaesthetist can show his skill by keeping the patient just beyond the point where surgical anaesthesia began. Very little ether is required from now on and the process of "soaking" the patient is entirely wrong and unnecessary. By keeping the pupils dilated slightly above normal but so they react to below normal under bright light, keeping the head turned to one side to allow mucus to run past the larynx, the head extended at proper angle to allow freedom of entrance of the air and ether vapor, the best results are obtained.

An anaesthetist cannot or at least should not attempt to give an anaesthetic and watch he operation at the same time. By continually watching a subject, the one who gives the ether will be enabled to give the smallest quantity required for surgical anaesthesia and it is his patients who recover the most rapidly, often becoming semi-conscious before leaving the operating table. The inattentive anaesthetist subjects his patient's life to great risk.

The slow, gradual method for ether is the best and I think the practice of saturating a cone with ether, clapping it over a patient's face, holding him to prevent struggling, is not true anaesthetizing, but a process of suffocation, and should be condemned. There is no advantage except the gaining of a few minutes of time for the surgeon, but this should never be weighed against the patient's safety.

No advantage is gained by the open method of giving ether; rather there are disadvantages, viz.: partial recovery during operation, the excited stage is longer and there is a waste of ether. If the patient shows the necessity for pure air the cone can be removed at intervals and indeed I believe this is good routine practice in each case. As a rule too much ether is given and it is probably true that in the first one hundred cases twice as much is used as in the second one hundred cases.

Chloroform.

Is always given in open method on a mask or padded handkerchief. The same general rules are here followed as for ether administration. The gradual slow dropping of the chloroform at first, increasing gradually until the stage of surgical anaesthesia is reached and then adding the minimum amount required.

When using chloroform the anaesthetizer should at all times watch the pulse of the patient as well as the color as shown in the face, by so doing he may be able to avoid serious results. A good general rule to follow is: watch the respirations in ether anaesthesia (and by this I mean watch and not listen to it), watch closely the pulse and color of patient's face in chloroform administration.

Indications of Surgical Anaesthesia.

These for both chloroform and ether are as follows:

The patient gradually becomes more quiet, the pulse rate at first rapid, becomes slower, falling from as high as 130 to 150 to nearly normal; the respirations which in the beginning are irregular and shallow are fuller and more rhythmic, the pupils slightly dilate, the color, at first dark red or bluish, fades.

The abolition of the reflexes, especially the conjunctival, in fact the condition simulates one of a normal deep sleep.

So long as these conditions remain present the best anaesthesia is maintained, and but very little anaesthetic is required from time to time.

Indications for addition of more anaesthetic are movement of eye-balls, return of conjunctival reflex, sighing respiration or attempts at vomiting.

Dangers.

(a) Ether. There is very little attendant upon ether anaesthesia if it be properly given. Inspiration pneumonia, or strangling from lodgment of foreign bodies of food in the larynx need not occur if the patient has been properly prepared and questioned as to artificial teeth.

By keeping the head of the patient turned to one side or other, always on the one away from the field of operation, the unpleasant results of the entrance of mucus into the pharynx can be avoided. The necessity for use of mouth gag and tongue forceps is a reflection upon the ability of the administrator.

(b) Chloroform. Has more dangers than ether. Syncope is quite apt to occur, the first symptoms being a feeble fluttering pulse, a ghastly pallor, blueness of ears and finger tips, sudden dilation of the pupils, and respiratory embarrassment. The chloroform should of course be removed, the patient's head lowered, legs raised to assist in the return of blood to the heart, artificial respiration, hypodermic injections of heart stimulants, etc. Shock is more profound if more chloroform than is necessary is used; that in itself is danger.

Asphyxia may also occur in chloroform anaesthesia; the mode of treatment is plain.

Recovery.

The time for patients to recover from a general anaesthetic varies from a few minutes to

several hours, depending upon the dose given and sometimes upon the individual himself. The minimum dose is followed by the quickest recovery.

Careful watch should be kept of an anaesthetized subject until complete return to consciousness and when he is able to clear his own mouth of mucus.

For the vomiting which may or may not follow, such things as cologne water, smelling salts and the inhalation of vapor of vinegar or acetic acid are often used with excellent results.

Stimulants should be used when indicated. Heat to extremities and body if shock is profound. The use of normal saline solution aids in the elimination of a general anaesthetic.

Regular meeting held April 12, 1905, with the President, Dr. J. B. Murphy, in the chair.

Symposium on Anaesthesia.

Discussion.

Dr. Rosalie M. Ladova: Mr. Chairman, members present: In the year 1900, March 31, the Journal of the American Medical Association published a report of 101 cases of anesthesia administered by me in my service as interne at the Woman's and Mary Thompson Hospitals of Chicago.

I started the work for my own edification as I was painfully conscious of the scanty store of knowledge I carried with me on the subject of anesthesia from the college, especially when I considered the great responsibility of my work at the hospital as anaesthetist. The data for the tables which formed the basis of my study were jotted down on scraps of paper, sometimes on the sheet covering the operating table. This was quite a task, as I often gave five and six anaesthesias in one afternoon. The number of cases reported was about one-half of that given.

Notes were taken as to duration, pulse and respiration range, condition of the pupils, gastric irritation, how soon anaesthetized, how soon out, and the amount of the anaesthetic.

The normal ratio of the pulse and respiration was disturbed in almost every case, and the changes in one are quite independent of the changes in the other. In 48 of the series vomiting was present, in 38 absent. In the rest no record was obtained.

Ten to 15 minutes was the average time to induce anaesthesia; to try to secure it in much less time means to shut off the air before the patient has lost consciousness and cause a smothering feeling, which is anything but humane.

The time it took the patients to come out corresponds more to the amount of the anaesthetic consumed than to the duration of the anaesthetic. The stage of excitement was present in only four cases.

I urged the necessity of trained anaesthetists in hospitals and colleges to oversee and instruct the beginners. I heartily recommend this line of study to every conscientious interne and cheerfully refer you to my original tables. Jour. Am. Med. Ass., March 31, 1900.

Dr. E. W. Ryerson: I am greatly interested in anaesthesia for short operations, such as the cutting of tendons. In 1898, I saw Hewitt, of

London, use nitrous oxid with success, and also bromid of ethyl. In my experience, covering 125 cases, the bromid has been perfectly safe, attended with no bad results, and so simple and easy of administration, that it ought to be used more than it is. The small tube contains enough for an anaesthesia of about five minutes. Take an Esmarch chloroform mask, place a layer of oiled silk on the outside of the gauze (it is not decomposed like rubber); pour the contents of the tube into the mask, place it over the face, and the patient is asleep in four or five breaths. There is no struggling nor disagreeable symptoms.

I have done a number of tenotomies and other operations, some of which lasted ten minutes, without the patient being sensible of any pain. He comes out from under the anaesthetic in about five minutes, feeling only a little dizzy, as after the administration of nitrous oxid. I have rarely seen a patient vomit. It is quick, safe and worthy of trial.

Dr. J. R. Pennington: I regret that Dr. Schroeder was not present to read his paper, as I desired to present this specimen in connection with the discussion on "nerve blocking."

It occurred to me some time ago that if the nerves leading to the rectum and anus could be "blocked" that we could dilate the rectum and proceed with many of the operations in this region without putting the patient to sleep. With the assistance of Dr. Eckley of the College of Physicians and Surgeons, I found that it is possible to quite successfully block the nerves supplying this region. By examining this specimen, which I injected with a solution of methelyn blue, you will see that the inferior hemorrhoidal nerves are well surrounded with the solution. To surround these nerves with the solution the needle of the syringe is introduced about one inch external to the anus and carried outwards and backwards towards the posterior border of Alcock's canal to a point about one inch above the inner margin of the tuberosity. To anaesthetize the deep part of the perineal nerve the needle is then carried forward to the region of this nerve. The opposite side may be treated in the same way. To anaesthetize the perineal branches of the fourth sacral and other nerves posterior to the anal canal, the needle is introduced in the posterior median raphe and directed first to one side and then the other and the solution deposited. The entire region may be anaesthetized from this point, thus necessitating only one skin puncture. If the analgesia is not quite complete at some points it may be supplemented with infiltration analgesia and the operation proceeded with painlessly.

With regard to giving nitrous oxid and ether: When I was at St. Mark's Hospital in London 12 years ago, this method was practiced quite extensively. I saw Mr. Cooper do seven operations on the rectum in one afternoon, in 80 minutes. Each patient walked into the room, got on the table, was anesthetized, operated on, carried out, instruments washed, and he was ready for the next patient; a little over 11 minutes for each operation.

Dr. J. B. De Lee: In my obstetric operations

I use chloroform exclusively, and in abdominal work I always use ether. The patients I operate on are always women in the prime of life, and, therefore, I have had no mortality.

Dr. O'Neill: There is a method of giving nitrous oxid by using a mask that covers the nose only, and by opening the mouth, it closes the pharynx, and the air passes in through the nose. The patient breathes automatically. (Exhibited Dr. Richardson's device for holding the mouth open.)

Dr. Wm. H. Wilder: In connection with Dr. Rics' paper, I should like to sound a note of warning. Some years ago, scopolamin came to the attention of ophthalmologists as a mydriatic and cycloplegic. It was found to be an admirable drug; it acted promptly; could be used in small quantities, and it paralyzed accommodation as completely as atropin. It was used widely until we came to have serious symptoms, and that only from dropping the drug into the eye, not stronger than a 1% solution, as a rule. I had in my practice a very serious case of poisoning.

Any attempt to use the drug in an extensive way by hypodermatic injection for anaesthesia, should be carried out with considerable caution.

I should also like to emphasize the value of ethyl chlorid as an anaesthetic for short operations. I have had some experience with it and have found it extremely valuable. It is superior to bromid of ethyl, in that the startling cyanosis is not present. It must, however, be used in an appropriate apparatus, such an one as is made by Meyrovitz. If used with the ordinary inhaler, one is apt to get such rapid congelation of moisture on the inhaler that the patient does not get the vapor, but with this apparatus, it can be administered easily and effectively. For short operations on children it is ideal. I have also used it as a preliminary to ether narcosis with success.

Dr. A. Goldspohn: With regard to the most commonly used agents, chloroform and ether: The first essayist made the statement that opening the mouth with a mouth gag, or attempting to hold it open, was rather a reflection on the anaesthetist's ability. That is a very bad policy to pursue, especially as most of the anaesthesias with these remedies are not given by experts. What he says may be true to a certain extent, but if that policy be pursued, then every one who gives an anaesthetic, whether he knows anything about it or not, will keep the patient's mouth shut, whether he has the head bearing on the occiput or turned sideways. The result of that often is very bad.

In the first place, we do not know how well the patient breathes through the nose, or how much the naso-pharynx may be obstructed under normal conditions when the patient is not anaesthetized. Then there comes to that some additional obstruction from the anaesthesia, and the patient does not get his normal supply of air, the mouth being closed. I have seen this so frequently, and in the hands of men who were quite satisfactory in their work generally. Everything becomes perfectly satisfactory by simply opening the mouth and holding it open. And I cannot see anything cruel in that. It is

usually not difficult to open the mouth, and it is easily held open by means of a grooved rubber wedge. The tongue is completely under control, better than merely by holding the angles of the jaw. If mucus accumulates, as it does more or less, with every anesthesia, it can be removed readily. The danger of inhaling mucus that becomes infected from the mouth is removed. So that I think that this idea of not being quite proficient unless you give an anaesthetic with the mouth closed is a mistake.

Dr. A. Belcham Keyes: This subject has more value in its discussion than appears on the face of it. Anaesthesia, as a rule, with either ether or chloroform, is so frequently unsatisfactory, that one hails with a good deal of pleasure experiments with other anaesthetics, with the hope that it will eradicate the dangers, especially of chloroform. And yet in those dangers we are not always justified in blaming it on the anaesthetic entirely. In some of the hospitals with which I am acquainted it is usually the most youthful and inexperienced member of the house staff who gives the anaesthetics, and that is not right. Also, many surgeons even have their anaesthetics given in private practice by a medical student or nurse, and his or her idea of anaesthesia is often only that he must get the patient under and keep it under till the operation is completed.

It is very necessary that we should know first the quantity and time necessary to produce anaesthesia, and then to know when the patient is sufficiently under. I gave chloroform for years in hospitals, and I always followed the pupillary reflex. I have done hundreds of anaesthesias for major operations, never even keeping the pupil entirely contracted, and never finding any necessity for dilatation, except in those few cases where the reflexes of the body must be abolished entirely, as in impacted shoulder in transverse presentation. Anaesthetics should certainly only be given by people who carry diplomas and are duly qualified.

Dr. Bertha Van Hoosen: I was very much disappointed that Dr. Van Hook did not speak of nitrous oxid anaesthesia as anaesthesia by itself, and not as an aid to ether anaesthesia. A few months ago I reported about thirty cases in which nitrous oxid was the only anaesthetic used and a large number of the operations were quite long in duration, some an hour and a half. Yesterday I operated on a patient who had a femoral hernia which had been treated by the injection method. The operation required an hour and a half, and was immediately followed by plastic work on the vagina, the entire operation lasting one hour and fifty minutes. The patient was 58 years of age, and had an organic heart lesion. Before the bandages were put on she was perfectly conscious. There was no nausea or vomiting; she urinated and had several evacuations of the bowels during the first twenty-four hours.

I think one reason why there is so much fear of nitrous oxide for long anaesthesias is that the patient becomes cyanosed. In ether anaesthesia cyanosis is a danger signal, but not so in nitrous oxid anaesthesia. Three whiffs of air do away

with the cyanosis. I have never seen a patient who would not have a very good color after three whiffs of air during nitrous oxide anaesthesia.

Dr. Robt. J. Gay: I am rather disappointed at the attitude Dr. Keyes took with reference to the interne giving anaesthetics. You cannot rely on one sign or symptom. I have seen professional anaesthetists watching the pupillary reflex of a tabes dorsalis patient and wonder why he was going to the bad.

At St. Luke's Hospital we give 5-600 general anaesthetics during the two years service, and we give as good an anaesthetic as the man who operates every day successfully and has not given an anaesthetic for thirty years.

I want to say that the jaw should not be opened. When the jaw is open and the tongue is not pulled out, the patient cannot breathe through the mouth. If we hold the jaw forward, the tongue comes up. The youngest patient I gave an anaesthetic to was six weeks old; the oldest 96 years, in a series embracing about 530 cases in two years.

I do not think it is fair to get after the interne just because he is beardless and youthful. We all have to learn and we must learn some time. The beardless interne is often more fitted to give an anaesthetic than the bewhiskered operator, who either never learned how, or has forgotten how.

Dr. William Fuller, in closing the discussion, said: I would indorse all that Dr. Bevan has said with reference to nitrous oxide anaesthesia. My experience, as stated in the paper, with reference to this kind of kidney surgery, has not been large, and this method of anaesthesia had not occurred to me, but I regard the suggestion an excellent one.

I also indorse what Dr. Eisendrath has said, but it is not always easy to determine whether or not there is hemorrhage; it may be absent altogether, or may be present owing to some other condition.

Shortly after operating on this boy I came in contact with a case which appeared to be similar to the boy's case; the symptoms were similar, though more pronounced, particularly with reference to pain and tenderness. I lost no time in operating on this case and was chagrined to find that the renal wound or injury was very slight, and one from which he would have promptly recovered without an operation. He had a very trivial wound of the kidney, from which a slight hemorrhage had taken place, and which was responsible for the symptoms above referred to. In reference to the injury to the peritoneum, it is quite common, but in the boy's case such was not evident.

Dr. Peterson (closing the discussion): The patient should always be instructed to breathe naturally. Many breathe through the mouth, and should be allowed to inhale the anaesthetic that way, and then you will not have any trouble. If there is trouble, it is because the anaesthetist is inattentive.

Dr. H. M. Richter (closing the discussion for Dr. Van Hook): The mouth gag cannot be used

with the apparatus shown because the anaesthesia is to be continued with ether. The object of the paper was to bring out the use of the gas preliminary to the use of ether. Dr. Van Hook uses nitrous oxid entirely in all short operations, some lasting as long as ten or twenty minutes.

A clinical meeting was held April 19, 1905, with Dr. Norval H. Pierce in the chair.

Dr. Frank X. Walls exhibited a specimen of atelectasis removed from a very young infant.

Dr. John L. Porter reported and exhibited a case of upper cervical spondylitis.

Discussed by Dr. Ryerson.

Dr. Ryerson showed a case of tubercular cervical spondylitis.

Dr. M. J. Seifert read a paper entitled "Traumatic Cerebral Diabetes," and presented the case, which was discussed by Dr. Allen W. Gray and, in closing, by Dr. Seifert.

Dr. Charles S. Williamson reported and exhibited several medical cases, including one of aneurysm.

Discussed by Drs. Mix, Grinker and Williamson.

Dr. Charles L. Mix presented a case of eccentric hypertrophy of the base of the skull.

Discussed by Dr. Grinker, and, in closing, by Dr. Mix.

Dr. Carl Beck showed a patient upon whom he operated for neuralgia of the fifth nerve six years ago, the patient having been entirely relieved.

Adjourned.

ATALECTASIS.

Dr. Frank X. Walls: I have here a specimen removed from a baby who died this morning. The child was six weeks old. Last Sunday the child had a spell of nervousness; it became a little blue, and had a convulsive seizure which lasted several minutes. After that time the baby was rather pale and weak. Early this morning it had a similar spell, and died. The only other feature of note is that it had not gained in weight since its birth. It was rather pale, and after these spells became a little puffed around the eyes.

The specimen, as you will observe, shows the thoracic organs with the trachea and tongue. We have here a posterior view of the organs which shows the left lung in a relatively normal condition, with the exception of a small patch of atelectasis. There is to be seen over the lower lobe at the base a spot of about an inch by an inch and a half, this portion of the lung being atelectatic. There are a few smaller spots of atelectasis in this lung. As to the right lung, the upper middle and lower lobes are completely atelectatic. There are many small sub-pleural hemorrhages in the atelectatic lung.

The other organs were comparatively negative, with the exception of a slight edema of the subcutaneous tissues and a little serous effusion into the peritoneal cavity, the pleural and pericardial cavities.

The specimen is interesting in that it shows such an excessive degree of atelectasis, that involves one lung entirely and that this condition had existed from the time of birth without at-

tracting attention to the fact that there was any extensive organic disease. Such cases, however, are not infrequent in which there may be very extensive areas of atelectasis with almost no symptom that would suggest such a condition until a convulsion or sudden death occurs, and one is surprised to find the greater part of the lungs have not expanded.

CASE OF UPPER CERVICAL SPONDYLITIS.

Dr. John L. Porter: The patient I show you is forty-five years of age, and by occupation an expert accountant. He was referred to me on the 10th of November last by Dr. J. L. Miller. Two years and a half before the patient came to me, that is, three years ago the coming summer, patient had an attack of what he called rheumatism. He noticed that this neck was getting stiff; there was considerable pain about the neck, and pain through the distribution of the cervical nerves. The patient made his own diagnosis, and after finding he did not get better under his own treatment, he went to the magno-mud baths at Attica, Indiana, and took a course in mud baths. Following that he went to work as book-keeper, in the meantime trying one thing and another for his rheumatism, as he called it. Again, he went down to Attica and took another course of magno-mud baths, and thought he felt a little better after these baths. He came back from there and went to work after three or four weeks of that treatment. Later he had so much discomfort, radiating down the shoulder and into his arms and neck, and his back became so stiff, that he had to lean on his desk like this (illustrating) and support his head while he was at his work.

He had practically no local treatment or a careful examination made before he went to Dr. Miller. An examination was then made, and Dr. Miller, suspecting what the trouble was, had an X-ray picture made, after which the patient was referred to me. I have brought along the X-ray picture because it shows the condition so much better than usual. You can look at both.

So far as the history is concerned previous to the onset of this trouble, I will say it is absolutely negative. The patient's family history is negative. The patient himself had never been sick or had to quit work previous to the onset of the present trouble. November 10th, when he first came to me, motion in the neck was nil. He came into my office and sat waiting for me a few minutes before he came into the consultation room, and leaned back against the wall. When I opened the door and asked him to step into the consulting room he immediately took hold of his head in this manner (illustrating) with his two hands, and lifted his knees in order to get up out of the chair, and walked into the office holding his head in the position I have shown you. He had no motion of the head, and muscular rigidity, which was so marked about the neck, extended clear down to the lumbar region. The muscular rigidity of the neck, of the thoracic and spinal muscles, was intense, and the slightest motion was guarded against in every way. He complains of some pain, chiefly in the left shoulder, but he has had pain in both shoulders. The head was held with the chin

down and inclining slightly to the right. That was the position so far as I can imitate it—not a very marked torticollis, but enough deviation to make diagnosis positive. There was marked induration of the tissues along the cervical spine. I made a clinical diagnosis of a spondylitis of some kind in the cervical spine, and then an X-ray picture confirmed the diagnosis.

I sent him home and put him in bed, with head sling and pulley at the head of the bed, with a three or four pound weight on the end of the rope, so as to make traction. Traction was kept on for about four days, at the end of which time the spasm had let up enough so that I put on a plaster of Paris collar, extending up under the occiput and chin, and spreading down over the shoulder. That plaster collar was worn for one week, when it was taken off and sent to the instrument maker to have a model made for this leather collar. During the time the leather collar was being made, traction was applied and kept up for another week. This leather collar was then put on and worn until the 1st of December. During the time he wore this leather collar it became evident to both of us that what he had gained in bed with traction was being lost. So, in discussing the case with Dr. Miller, who again saw the patient, we decided it was best to defer the use of the collar until we had tried weight and pulley traction for a while longer. He went to bed the first of December with three to five pounds weight on his head. The head of the bed was elevated a little. He stayed in bed without even sitting up, with traction applied from the first of December until the first of March. When he first went to bed he had, besides the signs I have enumerated, paresthesia and loss of power in both arms, one being worse than the other. The right was the better. Sensation in the arm was impaired, particularly in the distribution of the ulnar nerve. Sensation along the course of the ulnar nerve in both arms was very poor, but in the distribution of the radial nerve it was fair. He had increased reflexes both in the arms and legs, including ankle clonus and a distinct increase of the knee jerks. He had impairment of sensation in various parts of the legs, not as good as normal, yet not as poor as they were in the hand. From the 1st of December, when traction was put on, until the 1st of March he made steady and rapid progress. On the 1st of March, when he was allowed to get up, and the collar was again put on, power had returned in both hands, so that they were much stronger than when he went to bed. The area of paresthesia in the distribution of the ulnar nerve had disappeared. He had no pain through the shoulders, and the ankle clonus had entirely disappeared, but the knee jerks were still slightly exaggerated. On the strength of this, I let him up gradually, and applied the collar a second time. At the end of two or three weeks he went down town. He now goes down at about eight o'clock in the morning and comes back at half-past five. Motion in the neck has returned. There is absolutely no sign of muscular rigidity about the neck or spine. He is perfectly comfortable, goes about his business, and walks up and down stairs without any discomfort. He gets out of bed in the morning without

his collar and gets into his trousers standing first on one leg and then the other, which he has not done for two years. He is gradually improving in every way. He has gained in weight remarkably while in bed under treatment.

I wanted to show you this case while the patient is still under treatment, so you may see the apparatus that is used to immobilize the cervical spine. It supports the head comfortably and he is able to move his head but very little with the collar on. I do not consider that he is perfectly well. I have not considered leaving the collar off yet, because I think if I did so he would begin to go down hill again.

This case has interested me on account of two or three features. First, the excellent X-ray plate we have confirms the clinical diagnosis beautifully. I have never seen an X-ray picture of a case of caries of the spine that shows the area involved as distinctly as this does. Judging from the location of the hyoid bone in the plate, I think the disease is limited to the first four cervical vertebrae. Second, the case has interested me because of the rapid improvement under treatment, considering the fact that he has been a sufferer for at least two and a half years, possibly longer than that. Another thing is the fact that he has improved so rapidly, although he is an adult, because the prognosis is not said to be as good in adults as it is in children. I believe that this patient will get perfectly well. I do not believe, however, that he will ever have as good motion in his neck as he had before he was taken sick. The prognosis in these cases is said to be better when the disease involves the cervical region than when it implicates the lower regions of the spine, but in cases in which the disease involves the upper cervical region, say in the first two vertebrae, it has been considered bad, on account of its proximity to the vital centers of the cord. The danger from pressure in case of destruction of the odontoid process is said to be considerable. The change in his condition since last November is so marked that I cannot help thinking that he is on the road to recovery.

Discussion on Dr. Porter's Case.

Dr. Norval H. Pierce: I would like to ask Dr. Porter as to the temperature in his case?

Dr. Porter: I know very little about the temperature. I think it was taken once or twice early in the disease and found to be a little above normal; but it has not been necessary to keep it up, and as the patient was treated at home, without a trained nurse, the temperature was not watched.

Dr. Pierce: I suppose a specific history has been absolutely excluded?

Dr. Porter: Yes, sir.

TRAUMATIC CEREBRAL DIABETES; PRESENTATION OF A CASE.

By M. J. Seifert, M. D.

Instructor in Medicine, College of Physicians and Surgeons, University of Illinois; Visiting Surgeon, St. Mary of Nazareth Hospital, Chicago.

As the pathology of diabetes mellitus has ever been one of the most elusive problems of medicine, and as its etiology will remain obscure until the physiological processes of carbohydrate metabolism are better understood, a report of this

kind is of interest, and should tend to stimulate further research.

The pathological theories of Cohnheim, Thompson, von Recklinghausen, Auschütz, and other observers are well known, and their experiments have enriched medical science.

The view that diabetes mellitus should be classed among the neuroses is amply substantiated by reports of Purdy, White, Higgins and Ogden, Saundby, Lorand, and other scientists.

The etiology of the following case is significant:

E., a typical Chicago boy, 16 years of age, excellent family and personal history, fell down an elevator shaft, striking the floor head first, excoriating the skin surfaces over the right frontal and malar regions. Unconscious one hour, and stupefied seventy-two hours. Urinalysis showed sugar in less than twelve hours after accident. Daily analyses revealed the presence of sugar for eleven days longer. Patient took an easy job about sixty days after receipt of injury, and remained employed for almost two years; but the gradually increasing debility, emaciation, polyuria and depression of spirits induced him to seek medical advice again, when there was 7% of sugar in his urine, and the daily output varied between 7 and 30 pints. Numerous urinalyses since showed sugar in quantities ranging from a trace to 7%. The symptom-complex of diabetes mellitus grew more marked daily. The treatment was medicinal and dietetic, the latter being the more satisfactory as to results. In spite of any and all therapeutic measures, the prognosis is becoming graver and graver from day to day. The patient is now nearly twenty years old and in a deplorable physical condition—the merest shadow of what he was four years ago—a rugged, energetic, and rosy-cheeked boy of great promise to himself and his parents.

Discussion on the Case of Dr. Seifert.

Dr. Allen W. Gray: I am very much interested in Dr. Seifert's case, owing to the fact that it has been already in the courts for damages as the result of my advice to the lawyer in charge of the case, who incidentally mentioned to me that he was to have the patient's case the next day in court. In speaking about the loss of sight, he stated that he had sued the owner of the premises where the lad was employed for loss of sight as the result of a fall in consequence of an unprotected elevator. He went on to state the particulars of the case and the circumstances, I said to him: "Why don't you make the greater include the lesser, and why don't you sue for diabetes, a far more serious disability, as the result of the fall?" He said he did not think of that. All he knew was the boy was blind in one eye. I said that if you consult the doctors in the case, you will find you will have an A No. 1 case; you can prove diabetes as well as loss of sight and will undoubtedly get a heavier verdict. He went into court and got a verdict of \$10,000 as the result of the fall. There was one point, as I understand it, that was overlooked, and that was that previous to the injury the boy was rugged, robust, while now emaciated and debilitated; that he had lost some thirty or forty pounds as the result of this trouble.

I have been interested in these cases for some time, as in my work as examining surgeon for pensioning of old soldiers, injuries of the head frequently come up, and I have noticed cases of diabetes following, which could only be attributed to injury or injuries of the head. It is a mooted question as to whether one can always demonstrate the cause of diabetes back to the fourth ventricle or not, but I would not be at all surprised in the near future to find all cases the result of some neurosis, some brain trouble, behind the pancreatic or liver trouble, and that back of the whole thing there will be found trouble in the brain centers.

In reference to the remarks made by Dr. Gray, I will say that I gave Mr. Arnold Heap a full history of the case, including the existence of traumatic cerebral diabetes. The lawyer hesitated about bringing up the question of diabetes, fearing it would cause strife among medical experts, and being sure of a good case on the ground of total blindness alone. This blindness is not caused by diabetes but, presumably, by the fracture of the apex of the right orbit. The patient is now under the care of Dr. Karl Herz.

Discussion on the Cases of Dr. Williamson.

Dr. Charles L. Mix: The first case presented by Dr. Williamson was shown with the statement that there was no evidence of any specific infection. The value of little things is very excellently illustrated in this case. As the patient stood beside my chair, the extremely small size of his pupils first attracted my attention, possibly because I always look at pupils in aneurysmal cases to note whether there is a possibility of specific infection. And when, as in this case, I note extremely narrow pupils, I am of course immediately driven to the examination of the knee-jerks. This examination, made at my suggestion by Dr. Ryerson, showed them to be absent, and when Dr. Grinker kindly tested the pupillary reflexes, they were found to be rigid. Further interrogation by Dr. Grinker disclosed a history of lancinating pains, so that we have in this case the unusual combination of tabes with aneurysm; and if we adopt the teaching of Erb, in which I fully believe, we have very clear evidence that there has been an antecedent specific infection in this case. We have the association, at any rate, of a disease (tabes) which is metasyphilitic in the vast majority of cases, and of a process which has led to dilatation of the arch and to an aortic insufficiency. It was Lancereaux who first called attention to the association of aortic insufficiency and tabes, and subsequently attention was called to a greater or less extent to the association of aneurysm and tabes. This case is exceedingly interesting on account of that double association.

Dr. Julius Grinker: The patient presented by Dr. Williamson has tabes beyond any question. He has the Argyll-Robertson pupil, loss of knee jerks, lancinating pains in the lower extremities, the Biernacki sign, etc. The diagnosis of tabes here has been made upon a consideration of the classical signs of that disease.

Dr. Williamson (closing the discussion): I am greatly obliged to the gentlemen who have

discussed the case for bringing out several points which have arisen since I have had the opportunity of seeing this case. I saw him for the first time three or four years ago, and in the year or so which followed my first examination he was made the subject of several clinics. I saw him for the last time at a clinic held, I think, in the latter part of last summer. The history of his case had been taken with unusual completeness up to that time. Here, as in every case of aneurysm, the pupils were carefully watched, and no inequalities or myosis were present, and the reaction to light was perfect. The knee jerks were present, but somewhat diminished. At that time no pains were complained of, excepting such as could be properly attributed to the aneurysm itself. As the condition of the pupils and light reflex were especially examined for any possible changes, and specifically noted as normal, it can be stated positively that the pupillary changes now present have developed since last summer. I telephoned the patient this morning to come down to the society this evening, and have had, therefore, no opportunity of examining him. I shall take the first opportunity of going over the nervous system with care, and comparing it with the previous findings. As to the question of a syphilis having existed, that is a question which depends largely upon the belief of the examiner. While admitting the very frequent relationship of syphilis and tabes, I do not belong to those who believe that tabes is practically invariably a meta-syphilitic disease. The question of syphilis was very carefully gone into, and as I have stated, nothing could be found definitely indicative of it.

Discussion on the Case of Dr. Mix.

Dr. Julius Grinker: We are to be congratulated on having such an interesting case presented to us, because we are far from knowing all about the deformities of the skull bones as well as the enlargement of other bones. Marie, as we all know, has described acromegaly very well, and we have seen cases of it, and when they are so typical that anybody on the street can diagnose them, they are usually called acromegaly. This case, of course, is not one of acromegaly, but its particularity recalls the other disease. In connection with it I am reminded of a case that came under my observation which presented an enlargement of the frontal bone, not of the inferior maxilla—large ears, rather prominent mouth, and hands that look like spades, with a peculiar shape of the foot. No reflexes were elicited at the knee, and there appeared to be a double Babinsky. Patient had suffered from headache and spells of dizziness. During one of these spells he fell off a ladder and was brought into the hospital unconscious. A diagnosis was made of cerebral trauma and by mere accident the bony enlargements were discovered. I then thought of an atypical acromegaly. However, he has not any of the other signs of acromegaly. Upon closer observation it was discovered that the patient was having a marked case of tabes and general paresis, the so-called tabo-paresis of the Germans. I have not seen or heard of a case of tabo-paresis with enlargement of the frontal end of the cephalic

bone and of the hands, and with the peculiar shaped foot as observed in my case. Would it be a hypertrophic exostosis of the frontal bone and of the bones of the hands, or would it be a case of general paresis complicated by acromegaly? It is such atypical cases of bone enlargements that we occasionally find. Dr. Mix's case is extremely interesting on account of its association with the Basedow symptom-complex.

I should like to ask Dr. Mix, what was the condition of the superficial and deep reflexes, and whether we have some nervous trouble in addition to the so-called hypertrophic exostosis.

Dr. Mix (closing the discussion): In answer to Dr. Grinker's last question, I will say that I have previously examined the patient carefully for nervous trouble, and that I found none. The pupils reacted perfectly to light and accommodation. Convergence was normal. There is a slight wobbling of the eyeball which might suggest nystagmus, but to me it does not; it suggests rather a certain amount of paresis due to muscular strain on account of the bad position of the eyeballs. These are the only nervous manifestations, together with tachycardia and extreme restlessness. I should have mentioned family history shows that she is the second one other point, namely, that the history of the patient as given to you is absolutely good. The child of a family of five, in which no miscarriages occurred. There is absolutely no possibility of luetic infection in this case, and the case in general creates no suspicion of that condition. I ought also to have mentioned one other point which escaped me in summarizing her case, and that is attacks of vaso-motor disturbance. These attacks are not unlike hyperidrosis, which come on in cases of Basedow's disease. She tells me that a cold sweat stands out on her forehead, during which the tremor increases as well as the tachycardia. These attacks belong to the vaso-motor type, and are undoubtedly associated with a general tropho-neurosis, of which the bony enlargement is a local manifestation.

A regular meeting was held April 26, 1905, with Dr. Wm. L. Baum in the chair.

There was a symposium on gonorrhea. Papers were read as follows:

1. The internal treatment of gonorrhea, by Dr. David Lieberthal.
2. Remarks on the local treatment of gonorrhea in the male, by Dr. R. R. Campbell.
3. Complications of gonorrhea in the male, by Dr. Wm. T. Belfield.
4. Analysis of some methods of diagnosis and treatment of gonorrhea, by Dr. L. E. Schmidt.
5. Impotency and sterility due to gonorrhea, by Dr. Frederick Leusman. See page 549.
6. Gonorrheal urethritis and cystitis in the female, by Dr. Gustav Kolischer.

The symposium was discussed by Drs. A. W. Baer, Arthur Dean Bevan, E. A. Fischkin, Geo. Rubin, A. Belcham Keyes, David Lieberthal, Wm. T. Belfield, Frederick Leusman, and Gustav Kolischer.

Adjourned.

INTERNAL TREATMENT OF GONORRHEA.

By David Lieberthal, M. D., Chicago.

In enumerating the balsamics, Dr. Lieberthal dwells upon a preparation composed of Kawa-Kawa and East Indian sandal wood oil, known under the name of "Gonosan." The capsules were administered, two to three, after meals. From the observations of his dispensary and private patients, he also finds that the preparation lessens pain on urination and erection; but the other claim of various authors namely, that it prevents complications, cannot be confirmed, because the number of patients developing complications was not smaller than those showing complications by other methods of treatment.

Dr. E. A. Fischkin: I believe the aphorism is ascribed to Ricord: "Man contracts gonorrhea; the Lord knows when it will terminate." Oberlander says in his text-book of urethroscopy that he was never able to prevent an acute gonorrhea from becoming chronic and an anterior from developing into a posterior. If authorities of this magnitude are so pessimistic in regard to the treatment of acute gonorrhea, how can we hold more optimistic views? To my pleasure of listening to the master paper of Dr. Belfield was therefore added the satisfaction of hearing him say that he knows not of any internal treatment of gonorrhea. How shall we explain the action of internal remedies? The oils and balsams which we employ do surely not act on the whole economy, either through the nervous or vascular system; we don't use them in gonorrhea of other organs, in gonorrheal ophthalmia or rheumatism. The best claim which is made for them is that the resin-acids which they contain combine with the alkalines of the organism and form a soluble resin-soap, which by passing with the urine exerts a local astringent or bactericidal action on the urethra. But what little effect can we expect of this action, if there is any. If we let our patients drink water in large quantities, or if we give them diuretics, the resins in all probability become so diluted as to have no effect at all, and if we restrain them from drinking they will pass so little urine that it will hardly affect the urethra. If we consider how little satisfaction we obtain from the local application of drugs, the bactericidal action of which is known, and which we can employ as we please in any concentration, and at any length of time, we may realize how little we may expect from internal remedies, the principle of which and mode of action are problematical. No wonder that many of the best authorities are against any treatment of acute gonorrhea.

There is an article in the last number of the American Journal of Urology, of Prof. Zeissl, of Vienna, in which he corroborates the statement of the older Zeissl, that if we would treat gonorrhea in the same way as we treat other infectious and inflammatory diseases, that is, by rest and antiphlogistics, it would heal spontaneously without injections or the use of internal remedies. Gonorrhea is a self-limited disease which heals with and without treatment, and I don't believe that we can take any pride in treating and in curing an acute gonorrhea.

But it is different with the chronic forms. If a patient has suffered from gonorrheal urethritis for a year or more, and we cure it in a few weeks, we may safely contribute the result to the treatment. In regard to these, I would like to make a few remarks. With Dr. Schmidt, I would warn against the Jannet irrigations after the so-called Valentine method. The harm I have done my patients, the complications they have received were from copious irrigations by hydrostatic pressure. Since I used a catheter for these irrigations, I have not experienced any complications. The recurrent flow of the catheter has no mechanical force to injure the organs of the posterior urethra. I use a grooved metal catheter which can safely be sterilized and easily introduced, if of suitable size.

The essayists have not mentioned the method of dilating irrigations. I believe that in certain forms of chronic gonorrhea this method gives the best results, namely, in those in which the urine contains small but thick and heavy curved threads, coming from crypts and Littre glands. We accomplish here more by stretching the urethra and forcing the irrigation fluid into the folds and glands.

Dr. George Rubin: I wish to record my experience in connection with this symposium on gonorrhea. I have treated forty cases of acute gonorrhea in the last three or four years, and many chronic cases. In all my irrigation treatment I encountered but one complication—epididymitis. In four cases following the use of the catheter, there was an ascending nephritis in one, cystitis in one, and epididymitis in another. I have not used the catheter since. By using the irrigation method, the germs that are carried upwards are always in a very dilute form. The antiseptic effect of solutions of permanganate of potassium or of silver salts renders them harmless. I do not think anyone can use the catheter in these cases without doing more or less damage or causing complications. The catheter carries up the pus in a concentrated form. Out of my irrigation treatment without the catheter there was only one complication in thirty-six or thirty-seven cases.

Dr. A. Belcham Keyes: I have been interested in the various papers that have been read tonight in this symposium on gonorrhea, and after hearing the discussion and comparison of the results of treatment, I was reminded of the remark made by Stromeyer, in which he stated that it was a notable fact that the common private soldier recovered with a comparatively small amount of treatment, while the officer, who demanded to be cured quickly, usually had some complication. I have not read the original article of Stromeyer, but I have seen that remark quoted by others. Such a remark necessarily must be accepted *cum-grano-salis*.

I was interested in hearing Dr. Kolischer's remarks, and I feel that we cannot attach too much importance to the diagnosis. There are three points in the female that stand out as pathognomonic in their importance: viz. the implication of the urethra and the two Bartholin's glands, on either side outside of the

hymen, and about a finger's width above the fourchette. Puetch claims that these points especially should be examined in the so-called vulvitis of little children and whenever we find the implication of these Sanger's three *masculae-gonorrhoeica* it is our duty to institute a microscopic examination as a proof of the disease, which if proven demands the searching out of the criminal source of child infection.

It would have been a little more interesting to the members of this Society, and certainly it would to me, to have heard more discussion on the views expounded by Dr. Belfield as to the existence of Noegerrath's disease, described in his able article in 1872. While gynecologists do not, as mentioned by one of the speakers, find gonococci as large as fleas in every case, yet I assure you in our experience Noegerrath's disease does cut an enormous swath in the diseases of women, and it cuts a very wide swath in those cases that come under the headings of dysmenorrhea, abortion, sterility, etc. When we remember that there is a normal secretion from mucosa of the tube under normal circumstances and that the excess of health mucus drops harmlessly into the abdominal cavity, while in the so-called catarrhal conditions that Noegerrath has described which may travel upwards and set up an endometritis and then endosalpin, it is with an excess of tubal secretion. On opening this abdominal cavity we frequently find the tubes filled with mucus dropping or ready to drop into this cavity. Just how infectious this (Noegerrath's) mucus is, it is difficult to say. We find a swollen mucous membrane and usually a patent tube, with excessive apparently innocent mucus, but we may find also something in the way of spider-web adhesions in the pelvis with a more or less tendency to involve the ovaries. In fact, sometimes these cases are followed by abscesses of the ovary, the so-called corpus luteum abscesses or in higher grade of infection cysts. I am firmly of the belief that Noegerrath's disease should be recognized as a disease of itself, but just how to lay our hands upon the pathology and describe it as it should be described is very difficult.

The mere fact that we are not able to describe it clearly gives us no moral right to put it to one side and I believe with a more general discussion with reference to the lesions by those who treat the disease in the male as well as by those who treat the disease in the female, we would have a clearer understanding of one another's views and much good would result.

Dr. David Lieberthal (closing the discussion on his part): I did not prepare to have a fight tonight, nor to indulge in personalities. With regard to the remarks of the gentleman who criticized my paper, I will say that I will not lie for anybody or for anything. I have been familiarizing myself with medical literature in every line, so far as I could. Every man who is reading medical literature in the best journals knows that this preparation has been used by men of standing, as von Zeissl, whose reputation and honesty cannot be doubt-

ed, also Lohnstein, and by other urologists in Europe and prominent urologists in Chicago and elsewhere in the United States. The Doctor said that he saw some similarity between my article and others. That is natural, as I have quoted different authors and cited their names. I have used this preparation both in my private practice and in clinical work, and my colleagues have done the same. Does Dr. Baer think that the German government would stand for such a thing as allowing a preparation of this kind to be put on the market if the same is likely to cause injury to the public? If he thinks that, he is very much mistaken. He should investigate and he will find that people are in that respect much better protected over there than here.

At a meeting of the Chicago Urological Society, held in February, I read a paper, and I repeat what I have said before, that nearly every member of that Society had used this preparation and was favorably impressed with it. I did not come here to advertise anybody, or to show anyone a favor, but to make a plain statement in reference to my experience with this agent, and therefore I have nothing to apologize for.

Dr. Belfield (closing the discussion on his part): Dr. Bevan's explanation of the origin of rectal stricture seems plausible. If it be true that rectal stricture is far more common in the female than in the male, then his explanation of it is a foregone conclusion. It certainly is true, as Dr. Bevan said, that the general trend has been to ascribe rectal stricture to syphilis.

As to his question, Is the treatment of gonorrhea any more satisfactory now than it was twenty years ago? I answer emphatically in the affirmative. I am not particularly optimistic in therapeutics; I do not expect a gonorrheal patient to get well in a week, nor in two weeks; I tell him that if he is well in a month, he is more fortunate than the average patient; and that if he gets well in two months he has nothing to complain of.

But we get more satisfactory results with the modern silver compounds than we did with the ancient mineral astringents, of which the injection Bron was the best known.

Dr. Leusman (closing the discussion on his part): I regret very much that no member has expressed an opinion as to whether he agreed with me in my sentiments or not, so I am left guessing. Or does silence mean assent?

I will take this opportunity to express my gratification at the liberal discussion we have had this evening on this subject in general. I agree with much of what Dr. Kolischer has said, and I am quite sure that if his remarks with regard to treatment are carried out, they will bear fruit. Urethritis in the female, I am quite sure, is practically untreated in many instances. It is referred to in our wonderful text-books, and whatever instruction is given is useless; the treatment recommended and used has been largely that of swabbing the urethra with iodine or carbolic acid, which is about the worst thing the gynecologist can do for his patient.

I would like to ask Dr. Kolischer to state in detail the strength of the urethral suppositories he uses, their length, whether an inch long or shorter? How much cocoa butter he uses in each one; how much argyrol in each one; how much cocaine in each one, and whether the patient after instruction is to use the suppositories herself or the physician?

Dr. Kolischer (closing the discussion): In the first place, I want to say that the remarks of Dr. Bevan are satisfactory, in regard to recognizing a condition which is recognized by gynecologists, namely, the frequency of rectal strictures in the female. This condition has been recognized by surgeons and gynecologists and ascribed by some to gonorrhea, especially in women who have a torn perineum, the gonorrheal discharge originating from the vagina and flowing back into the rectum, re-infecting it.

Another source of infection recognized first by French surgeons and gynecologists is by intercourse with individuals infected with gonorrhea. If we look over the literature and reports from France, we will find more cases reported than from any other country in Europe. Pathologists explain these strictures in the female exactly in the same way as they explain the formation of strictures in the urethra of the male. There is infection with gonococci; after a while, invasion by microbes of the lower parts, with secondary infiltration and the formation of rectal strictures. These strictures are very important, not only on account of the obstructive symptoms they produce, but they are attended with considerable discomfort, on account of the careless and indiscriminate use of bougies.

I saw a woman die following the insertion of one of these bougies. She had a stricture of the rectum, and the bougie was inserted in such a way that it penetrated the meso-rectum and terminated in a fatal peritonitis.

As to the remarks of Dr. Baer, the gynecological part of them, I am sorry to know that there is still a man who fights against the fact that gonorrhea is one of the most serious and one of the most frequent infections of the female sex. If Dr. Baer would go a little further in his assertions and invent a paper similar to fly paper for catching these gonococci as large as flies, he would be one of the greatest benefactors to humanity since Christ was born.

In answer to the questions of Dr. Leusman, I called attention to the fact that the suppositories should be of a certain length. I did not go into details, as I endeavored to make a few concise remarks, touching essential points, rather than going into details. If Dr. Leusman desires to get detailed information, I would call his attention to my repeated publications on this subject, which began in 1888 and have continued until the present time. The iodoform bougies should contain ten per cent. iodoform; argyrol, 20 per cent.; protargol, 5 per cent. The female urethra is not over sensitive to the application of the silver salts. In answer to the question as to how much cocoa butter to use, that can be answered by the druggist. We do not need to bother about that.

So far as the application of these bougies is concerned, I mentioned expressly that we cannot treat the female urethra as we can the male urethra, because, as a rule, even if the woman is an expert, she will be unable to introduce these bougies into her urethra. We know of many cases where professionals have induced abortion by the introduction of sounds into the cervix, thinking they were introducing the instrument into the urethra. No physician should leave a woman to introduce a bougie into her urethra, etc. If he does permit her to do so, I think he is a correspondent to a crime if she hurts herself.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY.

A regular meeting was held April 4, 1905, with the President, Dr. Wm. L. Ballenger, in the chair.

Dr. John Edwin Rhodes reported cases of stenosis of the trachea and larynx following laryngeal diphtheria.

Cases of Tracheal and Laryngeal Stenoses Following Intubation.

Dr. John Edwin Rhodes: Miss L. F. is 16 years of age, of Jewish parentage; height, 4 feet 11½ inches, and weight 81½ pounds. When she was six years of age she was attacked with laryngeal diphtheria, for which intubation became necessary to save her life. This tube was worn for about two weeks, having been removed accidentally once, by the thread which had been left attached, and replaced during that time. The information with regard to this illness is rather indefinite; but patient's mother says she had been croupy and somewhat hoarse for some time preceding this attack. Immediately following the final removal of the tube she began to speak in a whisper only and found difficulty in breathing, which have continued ever since.

Since that time she has been in fairly good health, save for an attack of acute appendicitis two years ago, from which she recovered without operation. She has occasionally had sore throat. Another symptom has been a constant cough, which is affected by weather conditions, and is much worse during the winter. The sputum is thick and yellowish, and very profuse. An examination of this sputum shows that it contains no tubercle bacilli, but pus corpuscles, streptococci and staphylococci are abundant. Her complaint now is chiefly of this cough. Her breathing is somewhat stridulous, there being both a noisy and labored inspiration and expiration, showing a permanent and fixed obstruction to the passage of the air current. She usually speaks in a whisper, and this, with the laryngeal picture when she thus speaks, has led to a diagnosis of paralysis of the vocal cords by some physicians. On careful observation and inquiry, however, I find that she can phonate aloud in a high pitched voice, and clearly when she attempts to do so with a full chest, and can converse aloud provided she occasionally takes a deep inspiration. She can call loudly also. The reason she has given for using the whisper instead of the high pitched, forcible loud voice

is that her chest soon becomes tired when speaking aloud.

You will observe that she speaks both during expiration and inspiration, a method compensating for the poverty of air supply in the lungs, and which I have noted in other cases of stenotic conditions of the trachea and larynx.

Her general health is fair and she has attended school regularly, going through the seventh grade.

She has been pale, much more so for some years after her illness than at the present time. Her finger nails are a little bluish, but the mucous membranes are bright red. Her blood count is white corpuscles, 9,400; red corpuscles, 5,600,000. Her appetite is good and all functions fairly normal. Her pulse is 96, full, regular and soft; temperature, 99.

Examination of the chest shows a noticeable prominence of the lower segment of the manubrium sterni, but no other abnormal signs, save a somewhat labored breathing.

The nasal cavities are free, the fauces normal. On examination of the larynx, the vocal cords on whispered phonation remain abducted, but after taking a deep inspiration they abduct perfectly on phonating in high pitched voice. The anterior ends of the cords are broad and agglutinated at their edges, forming a broad band at the anterior commissure. Below the vocal cords at a distance of possibly 5 mm. on the left side of the trachea, is a broad cicatricial band, stretching across the lumen of the subglottic area, with a small opening in its right segment, through which the air passes. The arytenoids are freely movable. This cicatricial band not only obstructs the lumen, but has contracted the walls of the subglottic and tracheal area as can easily be demonstrated by external palpation.

I had hoped that a careful study of the case might show the advisability of some operative procedure, but in view of the fact that there is not only an obstruction of the lumen by the cicatrization but a marked narrowing and contraction of the tracheal wall, I am convinced nothing can be done to improve her breathing. Efforts were made by a surgeon for a period of two months by dilatation three times weekly to relieve the sterosis without any benefit. She also tried vocalization faithfully, but speaking aloud is always difficult. The chronic catarrhal condition of the tracheal and bronchial mucous membranes can probably be much relieved by inhalations and appropriate remedies. With that the patient will have to be satisfied.

About two years ago a young lady of 18 was referred to me, who had had diphtheria when four years of age, and had been intubated, and had worn the tube for a long time, coughing the tube out and having it replaced nine times. This lady spoke in a hoarse voice, speaking both with the expiratory and inspiratory currents of air. Her breathing was stridulous, but inspiration only was difficult. She was in robust health. In her case I found on examination of the larynx the left cord fixed in the central line, thickened, and on phonation was overlapped by the ventricular band, the arytenoid being quite freely movable. The right cord was movable

in restricted limits, but was also overlapped by the vocal band on phonation. The opening for the passage of the air current was between the left cord, fixed in the median line, and the right cord in the cadaveric position. The larynx was somewhat distorted by the cicatricial tissue. At the time I saw her she had an acute laryngitis which cleared up rapidly under treatment. No operative measures could be advised.

Some ten years ago I saw another case with Dr. Ingals, in which an intubation tube was worn for a number of years. It could not be left out for any length of time. It was necessary to remove the tube about once a month to clean it. During all the period it was worn it was not left out for more than five or ten minutes at a time, breathing then becoming difficult, and on several occasions it was necessary to replace it quickly in order to prevent the child from choking to death. I remember one time being summoned in great haste to the house, and when I got there found the patient deeply cyanosed and semi-conscious, showing imperfect aeration of the blood and breathing with the greatest difficulty. I removed the tube quickly without placing the gag, and found it had been almost completely occluded by the dry mucous in it. Finally it became necessary in this case to do a tracheotomy, as the wearing of the intubation tube was such a menace to the child, from the difficulty of getting a competent physician in time to remove it when it became obstructed by the mucus. That patient is still living, but now wearing a tracheotomy tube. During the last year, attempts were made to widen the opening for breathing through the trachea and larynx, but without success.

Discussion on Dr. Rhodes' Cases.

Dr. Otto J. Stein: In reference to Dr. Rhodes' cases, I was wondering whether the employment of thiosinamine would not be beneficial, particularly in those cases where there are cicatricial contractions of the trachea. I did not examine the case and I do not know whether Dr. Rhodes used that remedy or not. It is used in keloids, and other cicatricial deposits about the body, particularly in middle ear disease, and it suggested itself to me that it might possibly be used in this region in conjunction with mechanical dilatation of the stricture. It might be of some use in softening the stricture.

Dr. P. J. H. Farrell: In examining these throat cases I find one great advantage in using the mirror is to rub the mirror on the mucous membrane of the mouth instead of using water. In this way one can get a longer exposure and a very much clearer view.

Dr. Rhodes (closing the discussion): Dilatation was tried very faithfully in this case for a period of three months without any benefit whatever.

Thiosinamin has not been tried, although it might be worth while to try it in order to soften the stenosed cicatricial parts. There is a contraction of the wall of the trachea, which makes it impossible to get a free breathing space by any operative procedure. Breathing is freer now than it has been, but dyspnea is not a

symptom of which the patient complains particularly.

Dr. J. Holinger: First patient: Fireman, 47 years old; caught cold after cleaning a very hot furnace. Severe headaches started a week later. He came to the Alexian Brothers' hospital another week later. The findings were, swelling of the left side of the forehead and of the left upper and lower eyelids. Fluctuation could be felt over the medial end of the eyebrow and a defect in the bone underneath of the size of a bean. In the nose I could not detect any pus nor could I pass a probe into the frontal sinus. A radical operation after Killian, and now, four weeks after operation, you can feel that the sinus is filled with good callus. No communication with the maxillary sinus or with the nose could be found at the operation. This fact and the large destruction of bone after only two weeks standing of the empyema are the main reasons that this case is presented here.

Second: Carpenter, 47 years old; had headache on his left side since six weeks and sleeplessness. The left nostril was closed. A hard tumor of the size of a man's thumb filled it completely. The snare slipped and it had therefore to be cut out with a bone forceps. The tumor was an enormous bone cyst filled with polyps, after the removal of which it was found that it was the middle turbinal. Bone-cells in the anterior end of the middle turbinal are frequent but cysts of this size are rare. Furthermore was the origin of this cyst inflammatory, which is unusual, as Kikuchi, who has done the best work in this line, maintains that they were usually congenital. The nose is now very wide because the lower turbinal is squeezed against the wall. The opening of the Highmore's antrum can be plainly seen.

SOME MEDICAL TERMS COMMONLY MISUSED.

By Geo. E. Shambaugh, M. D.

The correct use of scientific terms is of first importance in medical writing where a definite concise presentation is paramount. In spite of this fact misused terms find their way into common usage. These errors are usually confined to the class of writing that forms the bulk of matter in our medical journals, yet some of them do occur in articles aspiring to be scientific, and in text books.

The confusion in the use of anatomical terms that had crept into our vocabulary was finally adjusted by the international convention of anatomists called together by His which met in Basel in 1895. At this time the entire anatomical nomenclature was revised. Terms which conveyed a mistaken conception of a part were dropped and new terms devised. Where the name of a man had been applied to a part this was dropped and an appropriate term applied. It is scarcely ten years since the work of this convention was completed, and today the nomenclature of His has been adopted in all writings of a really scientific character, and is being taught in our first class medical schools. The older terms which had been in common usage are being replaced even in writings in our second class medical journals.

It is not the use of the old nomenclature that is referred to in the title of this paper, but to the palpable misuse of certain terms.

In the ear, for example, we find the term *processus longus* often used when reference is made to the handle of the hammer, whereas the *processus longus* of the malleus is the *processus anterior* running forward from the neck of the malleus and buried in the anterior fold of the *membrana tympani*. The term ear drum is often used when the *membrana tympani* or drum membrane is referred to. The drum of the ear of course is the common name for the *cavum tympani*. More common, however, than the above errors is the misuse of the term middle ear. This is often used as synonymous with *cavum tympani*, whereas middle ear is a much more comprehensive term, and includes the *tuba auditiva* and the mastoid cells as well as the *tympanic cavity*.

Another term in connection with the middle ear that is commonly misused is the term applied to the antrum. We see this commonly referred to as the mastoid antrum, and frequently described as a large mastoid cell. As a matter of fact the antrum is not a mastoid cell, and while it is located at the base of the mastoid process it is really a part of the *tympanic cavity* as its correct name *antrum tympanicum* implies. The term mastoid antrum implies that it is a mastoid cell, and conveys a misconception of its true character which leads to a great deal of confusion in regard to the pathology of these parts. It was Leidy, one of our own great anatomists, who first pointed out the true character of the antrum, and showed that developmentally as well as in its histological structure this cavity was really part of the *tympanum* just as the attic and the *aditus* are and not in any sense a mastoid cell. It is only with this conception of the antrum that we can get a just appreciation of the significance of infection occurring in the antrum in the presence of a purulent *otitis media* and the relation of mastoiditis to antrum disease.

In the nose the confusion arising from the misuse of anatomical terms has been chiefly in connection with structures in the middle meatus. These parts are, in vivo, always more or less obscured from view and where one has not studied their relations on the cadaver it is very difficult to get a clear idea in regard to them. The terms that are most often misunderstood are the *infundibulum* and the *hiatus semilunaris* and the relations of these to the openings into the frontal sinus and the maxillary sinus. It is not uncommon to see the *infundibulum* referred to as the anterior end of the *hiatus semilunaris* which leads into the frontal sinus. In reality of course the *infundibulum* and the *hiatus semilunaris* are coextensive lying in the middle meatus, placed between the *bullae* above and the *unciform process* below. The *hiatus semilunaris* being but the slit-like opening leading into a furrow several mm. deep which is called the *infundibulum*. The anterior end of the *infundibulum* in the typical relation of the parts opens into the *sinus frontalis*, and in its posterior end is the *ostium maxillare* leading into the max-

illary sinus. Pus from either the frontal or maxillary sinus empties first into the infundibulum, and from this through the hiatus semilunaris into the middle meatus of the nose.

There is another incorrect term not an anatomical one, that has unfortunately got into common usage in the literature of our specialty. It is doubly unfortunate because in it the attempt has been made to use a scientific Latin term, but the word adopted has not been correctly derived, and to a foreigner who knows and uses the correct term our mistake must appear very ludicrous. Such errors are deplorable because they must tend to justify the cheap estimate which particularly the Germans have put on work done in this country. I refer to the term signifying an inflammation in a sinus. Some single term signifying this condition seems desirable. In the German literature a correctly formed term has long been in use. In this country unfortunately a wrongly formed word has been quite generally adopted. To those who have no appreciation for language this may mean little, but to those who have this appreciation such a mistake is something more than ludicrous; it is deplorable. The term signifying an inflammation is derived by adding to the noun stem the suffix *itis*. When for example we wish to express inflammation in the iris we add to the noun stem *ir* the suffix *itis* which gives us the term *iritis*. In the word sinus the noun stem is *sinu* to which when the suffix *itis* is added we have the term *sinuitis*. This is the term in common usage in German literature. Unfortunately in this country a misformed word *sinusitis* has been commonly used. To a foreigner who has been accustomed to the correct term the use of *sinusitis* must appear as laughable as would the use of "*iriritis*" or *appendixitis*.

Discussion.

Dr. Norval H. Pierce was asked to open the discussion. He said: There was one point that attracted my attention especially, and that is when we speak of the middle ear the picture presented to the mind is very apt to be nothing more than the *cavum tympani*, and undoubtedly this has been to blame for a number of misconceptions in the pathology of acute inflammatory conditions, as the doctor has pointed out. In comparison with the pneumatic spaces in connection with the tympanic cavity in the acute inflammations, the *cavum tympani* is of secondary importance, and I believe that this should be insisted on until the general practitioner who believes that in an acute inflammation, because the auditory function is most obviously affected, the *cavum tympani* is the most important, comes to realize that in all these inflammations the juxtaposition of the great blood vessels and the lining membranes of the brain render the pneumatic cells of very much greater significance than the *cavum tympani*.

I have noticed that the word *sinusitis* is used extensively in American literature; it has been used in German literature, also, and I believe Chiari has drawn attention to the incorrectness of its etymological construction. It is really a hybrid term—"sinusitis" or "sinuitis"—a wed-

ding of a Latin root "*sinus*" to a Greek suffix "*itis*," and that is not regarded as elegant by philologists. "*Anthrītis*" has been suggested.

Dr. William L. Ballenger: Is it proper to say middle turbinal or middle turbinated body?

Dr. Shambaugh: The terms turbinated, turbinal and turbinate bodies are all used when referring to these structures in the nose. The term turbinated body is perhaps the one most often used, but as far as I know the terms turbinal and turbinate are equally correct.

Dr. John Edwin Rhodes: There is another word that has seemed to me unnecessary that has come into use recently, and that is the substitution of the word *tonsillectomy* for *tonsillotomy*. It seems to me there is a distinction there without any difference.

Dr. Ballenger: On what ground?

Dr. Rhodes: A *tonsillotomy* is practically the same as a *tonsillectomy*.

Dr. Ballenger: A *tonsillotomy* is where you cut through the tonsils, removing a portion.

Dr. Rhodes: *Tonsillotomy* has always been used for extirpation of tonsils until within recent times, and I do not see why it is not a proper term. In Gould's dictionary the term *tonsillotomy* is defined as "ablation of the tonsils."

Dr. Ballenger: When you say *tonsillotomy*, you mean that you cut through the tonsil and remove a portion of it, whereas, if you take out the tonsil in its entirety it is a *tonsillectomy*. I have taken out tonsils in their entirety, leaving the capsule undisturbed, and I call that a *tonsillectomy*. If I should simply cut through the tonsillar tissue, I should call it a *tonsillotomy*. That is my idea of the correct use of the two words.

Dr. Rhodes: That is hardly a correct interpretation to my mind, for the word *tonsillotomy* covers the entire field. The word is derived from the Latin word *tonsilla*, a tonsil, and the Greek word *tomē*, "a cutting," (not to cut through), the term, I take it, referring simply to the method of operating, i. e., by cutting, and has nothing suggestive of whether it is a partial or a complete extirpation. I object to the use of the two words simply because I think one term covers the whole field.

Dr. Norval H. Pierce read a paper entitled, *The Present Status of the Question of Rarefaction of the Labyrinthine Capsule (Oto-Sclerosis)*.

After stating that the nomenclature of the disease process under consideration was not altogether satisfactory, the author stated that its development may be historically divided into three phases. The first phase began with the recognition of stapes ankylosis as a cause of deafness. The second stage was inaugurated by the discovery that the disease is a primary circumscribed process in the bony labyrinthine capsule, disassociated from demonstrable changes within the tympanic cavity. The third stage is that in which occurred further developments in the micro-pathology and the formulation of diagnostic methods.

That deafness may result from fixation of the stapes in the fenestra ovalis was recognized by Valsalva, 1724; by Morgagni, 1761, and by Meckel, 1777. From this time to the middle of the

last century no further development occurred. In 1849 Toynbee published his pathologico-anatomical researches in diseases of the ear, based on 1,149 preparations. Among these he found 126 specimens of ankylosis of the stapes. The value of these specimens was greatly reduced by the fact that they were accompanied by very scant clinical observations, but the publication gave a fresh impetus to the subject, and in the following thirty years the subject was enriched by the appearance of much research work by von Erhard, Kramer, Voltolini, von Troltsch, Politzer, and many others. The tardy development of knowledge of this disease was due to two factors:

1. The difficulty of obtaining post-mortem material that had been sufficiently observed during life.

2. The lack of correct diagnostic measures.

The process which causes synostosis of the stapes is a harmless disease as regards life. The temporal bones of those so afflicted can be obtained only when death results from some intercurrent disease or from violence. As regards the second point, it is sufficient to mention that as late as 1870 Schwartze believed that the only certain means of ascertaining the fixation of the stapes was by directly testing its mobility with a probe introduced through an artificial opening made in the tympanic membrane.

The second stage dates from 1861, when Moos published the results of his examinations of a case in which, besides entire absence of change in the tympanic mucosa, he found stapes ankylosis, to which he ascribed as cause a primary otitic process occurring in the bone itself. In a second case he ascribed the ankylosis to a circumscribed periostitis occurring in the labyrinth capsule itself. This publication was quickly followed by others, all agreeing in the main as to the pathological findings, but differing as to the exact histological origin of the process, that is, whether the pathological change originated in periosteum, bone, or cartilage.

The third phase in the history of the development of our knowledge of the disease began with Bezold, who, in 1885, reported the first case of stapes ankylosis, in which the correctness of the clinical diagnosis was verified by the results of a microscopic postmortem examination, and manometric tests of stapes mobility; while he at the same time laid the foundation of functional tests as an aid to diagnosis of the physician. Soon after this the microscopic examination of specimens of the temporal bone added greatly to the advancement of the subject. Politzer was the first to illustrate the microscopic findings of stapes ankylosis in his text-book published in 1887. To L. Katz belongs the honor of publishing the first case in which stapes fixation was diagnosticated during life by the results of functional tests, and which was microscopically examined after death. Since Katz's publication in 1890, there have been less than 40 cases reported, in all of which the diagnosis made during life has been confirmed by dissection.

The principal factors of interest in the pathology of osteoporosis are grouped about the

changes which occur about the footplate of the stapes and those in the bony walls of the labyrinthine capsule, the cochlea, semi-circular canal, and vestibulum.

The author called attention to the fact that fixation of the stapes may occur in conditions other than osteoporosis.

He discussed the etiology, saying that the cause of oto-sclerosis is still to be found.

The disease affects women more frequently than men. Oto-sclerosis is a disease of middle age.

Attention was directed to functional tests and diagnosis. The diagnosis of pure, uncomplicated oto-sclerosis was not difficult.

As to the value of Gilli test, it is variously estimated by otologists. The speaker has used it for a number of years, and finds that it is of great service in controlling Rinne test, especially in cases of oto-sclerosis. He agrees in the main with Gilli's deductions:

1. A negative Rinne combined with a negative Gilli permits the exclusion of nerve involvement.

2. A positive Rinne and a positive Gilli indicate nerve deafness.

3. A positive Rinne and a negative Gilli are strong presumptive evidence of stapes fixation and nerve involvement.

Dr. George Shambaugh: I think we are fortunate in having had the privilege of listening to a paper that brings up this subject so thoroughly and so accurately.

The question of diagnosis of oto-sclerosis is one which we have to meet daily. We find these cases where there can be no question in regard to the diagnosis. Where we have the drum membrane perfectly clear and the tube widely open, with the typical tuning fork test there can be very little question as to the diagnosis. On the other hand, we meet cases in which the condition of oto-sclerosis has been preceded in previous years by a chronic, perhaps suppurative, middle ear process, which renders the diagnosis more difficult, because here we get the same tuning fork test as in oto-sclerosis. The lower tone limit is destroyed to a certain extent, with decided negative Rinne, and a prolongation of bone conduction. There is no reason why a chronic suppurative process may not be followed in later years by an oto-sclerotic process, the two not being connected at all. The same is true of middle ear catarrh. A child may be suffering from adenoids and may have had tubal catarrh in early childhood. This may disappear leaving marks on the drum membrane of past catarrhal disease, from which the child had recovered. When such a case develops oto-sclerosis it is not easy to ascertain whether the symptoms are caused by the alterations produced by the catarrh or are the result of oto-sclerosis. The question of diagnosis here is difficult if not quite impossible.

In regard to the definition of oto-sclerosis, I do not know as I understood the doctor correctly, but I gathered that in his definition of the disease was included the condition that there has been no previous ear disease present

This is like the definition often given of Meniere's disease when it is stated that it is the result of certain definite lesions with certain definite symptoms, and occurring in a case where he made a post-mortem examination and because this case had suffered from no previous ear trouble is hardly a reason why one should exclude from the definition of Meniere's disease those cases where there has been ear trouble previous to the development of the conditions which we recognize under the name of Meniere's disease. There is of course no reason why a person who has suffered or is suffering from some ear disease, as for example chronic suppurative or chronic catarrhal otitis media, should not develop oto-sclerosis, the two perhaps being quite independent of each other. The diagnosis of oto-sclerosis in such cases will be quite difficult, and often impossible except by post-mortem findings.

The fact that the foot plate is often involved in the bony lesion of the labyrinthine capsule in oto-sclerosis suggest the long controversy running through the literature in regard to the origin of this part of the stapes. It has been pretty generally acceded that the foot plate of the stapes has quite a different origin from the remainder of the chain of ossicles, and that it is derived from the capsule of the labyrinth from which it becomes detached. Oto-sclerosis having its origin in the capsule of the labyrinth has directed attention to this interesting structure. If we look at a cross section of the temporal bone it will be seen at a glance each point where the labyrinth of the ear has been cut through from the ivory-like character of the bone immediately surrounding the labyrinth. This is the so-called capsule of the labyrinth. It is not easy in the adult to determine the exact line of division between the capsule and the surrounding spongy portion of the temporal bone, for the two pass imperceptibly into each other. In the foetus, however, and the new-born, the labyrinth with its capsule can be shelled out entirely free from the temporal bone. In the earlier embryo before ossification has taken place the labyrinth with its cartilaginous capsule can be shelled out in the same way.

A point of interest in connection with the capsule of the labyrinth is the question of its blood supply, and especially whether there are communications existing between the blood vessels of the capsule and those which supply the membranous structure of the labyrinth. Politzer on the basis of some investigation of his own believed that he could demonstrate communication between the blood vessels in the labyrinth and those in the part of the capsule forming the promontory, and since the blood vessels of the mucosa of the tympanum communicate freely with the blood vessels in the osseous structure forming the promontory Politzer believed he saw a direct route for extension of disease from the cavum tympani to the labyrinth.

The observation of Politzer has not been substantiated by subsequent researches along this line. I have for several years been working on the subject of the blood supply of the capsule of the labyrinth, and I have found a

method by which the blood vessels of the capsule can be readily studied and which I believe settles definitely many of the points in dispute.

Dr. J. Holinger: The latest work on oto-sclerosis is Denker's, which, as I see, is well known to Dr. Pierce. Only a limited number of cases have been published in which the post verified the diagnosis made during lifetime, a much larger number has not been published. Siebenmann says he has spoken on this subject and leaves the floor to the others. Denker approves of every word.

There are two different pathological processes which may lead to immobility of the stirrup in the oval window. First, Siebenmann's spongying process with out inflammation originating in the bony capsule of the labyrinth and second, the inflammatory process with periostitis which develops in old suppurations. The adhesive processes of the mallet and incus one reads so much about in the text-books have very little bearing on the hearing. What Dr. Shambaugh and many text-books with him call chronic catarrhal otitis media are either suppurations of the middle ear and if they lead to scars with stopping of the suppurations are called residues, or they are occlusions of the eustachian tube. Small amounts of viscid mucous may be found in the M. E. of these patients but that is not pus and the process can not be called suppuration because the mucous membrane is not inflamed. The mucous is a secretion ex vacuo and disappears as soon as the tube is opened. The publications of Bezold on these matters date more than 18 years back. Many modern text-books did not take any notice of these experiments and are therefore not up to date. The practical value of all this has been often demonstrated to me, when patients who were elsewhere treated with electric massage, etc., for weeks and months were cured after a few applications of the catheter.

Dr. Pierce (closing the discussion): In regard to Dr. Stein's question, I will say that in the body of my paper I gave statistics as to bilateral occurrence, quoting from Bezold. He gives 88 per cent of cases in which both ears are affected. From my own experience I believe that in much less than 10 per cent only one ear is affected. A good many cases of oto-sclerosis that are supposed to be bilateral prove to be unilateral, after careful examination. A great many of the patients who come to us say that they cannot hear very well in one ear. It may be the right or the left ear, and when we examine them carefully we find the other ear is affected as well, not as markedly as the one of which the patient complains, still, the defects in the lower tones, and decreased distance for whisper evidence its involvement. Bezold and Seibermann strive to exclude the idea of inflammations other than suppurative in the middle ear. Siebermann speaks constantly of "the reactions in tubal catarrh." This is somewhat misleading to our minds, because we are accustomed to divide the secretory processes in the middle ear into several categories. Bezold speaks of tubal catarrh as we speak of catarrhal inflammations of the middle ear. It makes

very little difference practically whether we regard those conditions which we have spoken of as catarrhal as being limited to the middle ear, or whether they are simply the result and extension of a condition that had its origin in the eustachian tube. That we can have fixation of the stapes in the fenestra ovalis in secretory (catarrhal) types of middle ear (tubal) inflammations due to organization of the products of such inflammations about the foot plate there can be no doubt, and this fixation, if it is complete, gives similar reactions to those of fixation of stapes as the result of oto-sclerosis. We have prolonged bone conduction, positive Rinne, and elevation of the lower tone limit, but the other factors, the presence of retraction of the drum-head, closure of the eustachian tube, the presence of fluid perhaps in the middle ear—symptoms that are characteristic of these inflammations, are present in the catarrhal type, where as in oto-sclerosis we have a patulous tube, and normal or nearly normal tympanic membrane. Even if we have tubal disease (or a catarrhal otitis media) and oto-sclerosis, the symptom complex of oto-sclerosis will so far overshadow the symptoms of catarrhal inflammation that we very rarely remain long in doubt. For instance, if we have the symptom-complex of Bezold, and on catheterization or inflation find there is considerable increase in addition, our prognosis should be very guarded, because these cases frequently go on and follow the usual course of cases of oto-sclerosis. We should not be misled, therefore, in those cases that give the reaction of fixation of the stapes, by an increase of audition on inflation. In cases where the bone conduction is decreased and with shortened or negative Rinne, and where there is indubitable evidence of tubal catarrh (or of a catarrhal otitis media), we may have the greatest difficulty in arriving at an exact diagnosis, and it is only by observing these cases for a considerable length of time that we can arrive at a correct diagnosis.

A regular meeting was held May 2, 1905, with the President, Dr. Wm. L. Ballenger, in the chair.

PALATAL ULCERATION.

Dr. T. Melville Hardie: Case 1. I had expected to present this evening two cases of pharyngeal and palatal ulceration, but have been able to convince one of my patients that the ulceration is syphilitic, notwithstanding the fact that we have been unable to discover the mode of infection. The patient who is present is a man of 56, who has an extensive tubercular ulceration of the right side of the soft palate, with ulceration of the right tonsillar region, including both anterior and posterior pillars. There is an infiltration of the epiglottis, increasing with the progress of the disease, but no ulceration of the larynx. The man suffers a great deal from pain on swallowing, and I have asked him to let you see him, not merely because of the clinical appearances of the case, but in the hope that he may be benefited by your advice as to treatment.

Case 2. The next patient is a man from

whom I removed a large sequestrum which involved the anterior wall, the floor, and inner wall of the antrum. I present the patient for the purpose of asking whether you advise my making an opening into the nose, removing a part of the turbinated body, and a part of the inner wall, and closing the outer wall, or whether you would not think it wise to still leave that open for purposes of observation. He is wearing a plate which conceals the defect. As it is now, the patient does not require any attention from his physician. In the event of closing the opening, I imagine some treatment would be required.

I want to know if any of you have had experience in cases of this sort that might benefit this patient.

Case 3. While I am speaking, I should like to put on record also a case of tuberculosis of the larynx in a man, 76 years of age, with extensive infiltration and ulceration of the epiglottis, also a large ulceration of the posterior laryngeal wall. His wife died seven years ago from pulmonary tuberculosis, and he has lost three children from the same disease. They were all young adults. I have never seen a patient as old as this man with tubercular ulceration of the larynx, and I thought it would of interest to mention the case.

Dr. Otto T. Freer: May I ask Dr. Hardie in regard to his first patient, whether a histologic examination of the tissues underlying and about the ulcer in the soft palate has been made?

Dr. Hardie: There has not.

Dr. Freer: Two years ago I saw a case of superficial ulceration of the mucosa over the hard palate extending into the velum. The appearances strongly resembled those shown by Dr. Hardie's patient and tuberculosis was suspected as the probable condition, but the microscopic examination of excised pieces showed epithelioma of a superficial nature. It was in fact a case of rodent ulcer, similar to the form well known to dermatologists occurring in the face, where there is a very slow advance and where there is only a thin layer of carcinoma tissue penetrating the tissues, breaking down as soon as created. Such epitheliomatous ulcers are for a long time very superficial, gross neoplastic formation is absent and in the pharynx they much resemble ill defined, ragged tubercular ulceration. It has been my fortune to see several such cases.

Without denying the probably tubercular nature of the ulcers shown tonight, I wish to call attention to the frequent need of the microscopic examination of sections of tissue in the diagnosis of ulceration of the pharynx of equivocal aspect.

Dr. Hardie: I should have said that the man's mother died at the age of 40 of tuberculosis; the father at the age of 60 of carcinoma of the stomach.

Dr. Freer: While it is probably a tubercular ulcer, I would suggest the possibility of it being a combination of the two diseases—carcinoma and tuberculosis.

In regard to the second case, I did not gather

a correct idea as to the nature of this sequestrum, or how it occurred.

Dr. Hardie: The man was sent to me by his dentist, after having had three teeth fall out in succession. He had been under the care of his dentist for some months. He went to him because a tooth became loose and fell out. The dentist treated the tooth cavity, and it did not heal, and after a little while the next tooth became loose and fell out. He treated the case a little longer, shortly after which a third tooth fell out. He had been washing the cavity with peroxide of hydrogen or some other cleansing agent. One could not tell how far this necrosis had extended, or how many of the teeth would have finally fallen out if he had not had this piece of bone removed. It was uncovered as far as possible, and in removing it I took away a good part of the anterior wall and the floor of the antrum, back pretty nearly to the posterior wall of the antrum, when it was found to extend as far as the middle line in the hard palate.

Dr. Freer: Did the process seem to be osteomyelitic, purely, inflammatory, or a dyscrasia practically?

Dr. Hardie: Syphilitic.

Dr. Freer: It seems to me, as long as this man suffers no discomfort, if he were my patient I should let him alone; but if food should lodge around the plate and cause annoyance, it might be well to do something.

Dr. Hardie: The opening in front is closed practically. No food lodges around the plate. If there should, it can be washed away when the patient douches the cavity.

Dr. Norval H. Pierce: I would like to ask Dr. Hardie if he has tried trichloroacetic acid on these tubercular ulcers?

Dr. Hardie: The only thing I have tried on them has been the X-ray. The X-ray has been applied twice a week for about six weeks, but without any noticeable effect. The exposures of the X-rays were not very prolonged, because we wished to be certain of doing no harm. The patient himself said he had not noticed any difference in the amount of discomfort until after the last couple of treatments, when the condition seemed to be considerably worse, so far as pain is concerned. He has received orthoform locally. I have not used anything else on the ulcers, because I thought I would like to see the effect of the X-rays on them, as we could get at them. We used a long tube to direct the rays on the ulcerated patch. I have seen very little difference in the appearance of the ulceration, excepting that before these agents were applied there were some small spots that looked like miliary tubercles, such as we not infrequently see in the pharynx.

Dr. J. Holinger: As to the treatment of the difficulty in swallowing in this case, as well as in cases of tubercular laryngitis, I had recently a very pleasant experience with a series of cases that I treated with a ten per cent solution of chloretone. The preparation of the solution was the only disagreeable feature in this treatment; but the results have certainly been very gratifying, in that the patients can swal-

low any quantity of food without pain if the larynx is painted with this solution about an hour or an hour and a half before meals.

Dr. Norval H. Pierce: In Killian's clinic, where a good deal of tuberculosis of the mucous membrane of the nose, pharynx, and larynx is seen, the use of the X-ray has been abandoned entirely as absolutely valueless.

I have seen a case of tuberculosis of the right posterior pillar heal under applications of trichloroacetic acid in these regions, where we can apply it with safety, is of more value than lactic acid. I should think this would be a case where anesthesin would be indicated, although I have very little confidence in it myself.

Dr. Hardie: I would like to ask Dr. Holinger what preparation of chloretone he uses, whether the crystals or the inhalant.

Dr. Holinger: I use a ten per cent solution of the crystals in olive oil.

Dr. Hardie: In the matter of tuberculosis of the throat, most of us have had cases in which we have found one particular agent that would always give relief; yet in using the same agent in another case we have been greatly disappointed. We know that a number of patients get well, so far as tuberculosis of the larynx is concerned, under the simplest treatment, and a number of others get worse under the most vigorous treatment.

Dr. Freer: I would suggest one thing I have used with success in a case of tuberculosis of the epiglottis, and that is the galvano-cautery used with a decidedly bright heat.

Dr. Hardie: I have had cases of tubercular ulcers of the epiglottis get well under applications of nosophen powder and menthol in olive oil. I believe I used it ten or fifteen years ago; but I do not think I have used nosophen now for years. I recall one case in which the ulceration was very extensive. The man had not been able to swallow solids or fluids from the time he left Colorado Springs until he reached my office. He said that his thirst was even harder to bear than the pain. I introduced a tube into the stomach and gave him a drink of cream and whiskey; the next day I curetted the ulceration of the epiglottis, and in about two weeks he was able to swallow beefsteak, and the ulceration healed. He died three years later of pulmonary tuberculosis; but there was no recurrence or further breaking-down of the ulceration in the epiglottis.

In the case we have before us the ulceration is very extensive, as a great part of the soft palate is involved. There is much ulceration in the right tonsillar region; both the anterior and posterior pillars are involved, and there is an increasingly large infiltration of the epiglottis. I felt justified in presenting this man in order, if possible, to get some useful advice from you.

Dr. O. J. Stein: I would suggest the use of formalin in the case reported and exhibited by Dr. Hardie, as it is being used a great deal in cases of tuberculosis of the larynx, with considerable success, by Denver men and others. You can give as much as fifteen per cent after anesthetizing the part; and the results are good,

so far as subsidence of the symptoms is concerned. I think it would be well to try it in this case.

Dr. Hardie: I used a three per cent solution of formalin after anesthesia, with great discomfort.

**An Improved Method of Making the First Incision Through the Cartilage in the Resection Operation on the Nasal Septum;
With the Exhibition of a Cartilage
Knife Designed for this Purpose.**

By Dr. Elmer L. Kenyon.

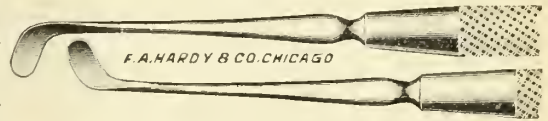
Assistant in the Department of Nose, Throat and Chest,
Rush Medical College, Chicago.

Dr. O. T. Freer's work in perfecting the technique of the resection operation upon the nasal septum has been so thoroughly done that one does not feel over-confident in suggesting improvements. It seems to me, however, that the method he pursues in making the first incision through the cartilage involves an essential and inherent weakness, in that it demands a degree of delicacy of manipulation on the part of the operator and a delicacy of the sense of touch, which, perhaps, most operators are unable to respond to. You are familiar with the manner in which this procedure is carried out. With a straight, very thin cartilage knife, held against the septum either vertically or at a more or less oblique angle, the operator moves it lightly backwards and forwards until it has penetrated the cartilage. He does this if possible with a finger in the concave naris, against which to work. The safety of the concave mucous membrane is dependent upon the delicacy of manipulation on the part of the operating hand, which, also, must interpret by a most keen sense of touch the instant when the cartilage had been completely penetrated; and, if the finger is in the concave naris, is dependent upon the delicacy as well of the sense of touch of that finger. In cases where the finger can be placed in the concave naris, and where the cartilage is not unduly thick, this procedure is reasonably safe. On the other hand, if the finger cannot be placed in the concave naris, or if the cartilage be unusually thick, it seems to me that only the most skilled operator can feel sufficient certainty in carrying out this procedure. Moreover, whether the conditions be difficult or easy, the concave perichondrium must necessarily be more or less injured. There is no way of making this sort of incision, as I see it, without injuring the concave perichondrium, and also more or less the concave mucous membrane. And furthermore, in a certain percentage of instances, the concave mucous membrane cannot but be penetrated completely.

As to whether a keen, thin knife is capable of producing injury to the concave mucous membrane sufficient to be of consequence, even where permanent perforation does not result, one of my cases throws some light in that case, although permanent perforation did not result, profuse hemorrhage occurred into the concave naris on the second day following the operation. The patient was many miles away and came all the distance to see me with the nose bleeding

freely. This case shows that injury to the concave mucous membrane even where permanent perforation does not result, may, at any rate exceptionally, be attended with consequences worth serious consideration. And as to whether complete penetration of the concave mucous membrane by a thin, keen knife is capable of resulting in permanent perforation, one of my cases also throws light. In this case I was making the first incision through the cartilage with the Sajous knife, the blade of which is straight and very thin; I was experimenting upon an improved technique. Suddenly I felt the knife give a lurch and knew that it had penetrated the concave mucous membrane. Looking into the concave naris I saw a little streak of dark on the surface of the mucous membrane, confirming my supposition that the knife had completely gone through. I was unaware of any further injury to this structure. A permanent perforation of about the size of a pea resulted. This case shows conclusively that complete penetration of the concave mucous membrane (possibly, however, with some concomitant injury) by a keen, thin-bladed knife may result, at least exceptionally, in permanent perforation.

Now if this step in the operation could be carried out without need for such a relatively extreme degree of education of the operator's hand, and if a very large part of the uncertainty attending the present procedure could be done away with; and, finally, if the step could be accomplished with scarcely any liability to injury of the concave perichondrium, or mucous membrane, the technique of the resection operation would to that extent be advanced.



Kenyon's Cartilage Knife.

The knife which I wish to present partakes of these characteristics: The blade is made exceedingly thin, and of course the edges are keen; the blade is set on the handle at an angle of 30 degrees; the upper and lower edges are each straight for a short distance and are parallel; the length of the blade is one-quarter of an inch; the blade is curved gently and gradually on the flat. The manner of using the knife is as follows: With the blade pointing away from the operator and with the concavity of the blade toward the convex side of the septum, the knife is placed against the cartilage, not vertically, or at a slightly oblique angle, but almost horizontally; then, with an upward and downward movement, and a pushing and lifting movement, the blade is made to penetrate the cartilage and to slip in between it and the perichondrium. One should bear in mind that in thus making the first entrance through the cartilage, he is working with the field of operation directly in front of his eye; he sees exactly what he is doing; his eye assists the sense

of touch of his hand. The object of the lifting movement is this, that the instant the end of the knife has penetrated the cartilage, its farther edge at the place of penetration is lifted away from the perichondrium, and the operator sees the perichondrium through the opening. There is no hesitating to make sure that the blade is completely through the cartilage, no strained dependence upon the sense of touch in order to be certain of avoiding penetration of the concave mucous membrane; on the other hand, one sees instantly when the knife has gone through. Consider the situation. The blade has penetrated the cartilage in that one place, and thus its extremity lies between the cartilage and perichondrium; the concavity of the knife is towards the cartilage. Now, in order to enlarge the incision, the blade is held firmly against the cartilage and moved upwards or downwards, the upper or lower edge cutting its path through the cartilage, and the extremity of the blade moving between the cartilage and the perichondrium. There is, I think, very little danger indeed of injury to the concave perichondrium or mucous membrane, for the reason that the curve of the blade is towards the cartilage and the pressure is in the same direction, so that, if the knife should slip, it must be the cartilage that is injured and not the perichondrium or mucous membrane. However, if dense adhesions were present, one would meet with difficulty, as he might meet with difficulty in the other procedure. In such cases I suppose that one should make a relatively small incision directly in front of the eye, and then with some form of separator dislodge the perichondrium from the cartilage above and below and complete the incision with a crooked knife. Since it is necessary to work with the blade away from the operator, both a right and a left knife are necessary, but the cost of the knife being no more than that for a simple cartilage knife, the increase to the expense of the necessary outfit for the resection operation is not excessive.

Dr. Otto T. Freer: In designing his new cartilage knife for the first cut in the cartilage Dr. Kenyon has employed the proper principle of construction, that is, his instrument has a keen, very thin, razor-like blade, so that its use requires no pressure in order to make it cut. This is to be emphasized, for other instruments for the first cartilaginous cut are being recommended for use that are incorrectly made. For instance, Killian scratches through the cartilage of the septum with a thick-lipped, chisel-edged instrument, which must by reason of these qualities be necessarily pressed against the cartilage in order to wear its way through. Even the slight force thus required implies a stiffening of the fingers holding the instrument and so deprives the operator of the delicate sense of touch that is necessary to inform him when he has cut through to the under surface of the perichondrium on the concave side, a sense of touch which is preserved when one cuts through with a lightly held keen edged knife. Others, who have operated under my direction, have ex-

pressed their surprise at the accuracy with which the tactile sense indicates by a sense of lessened resistance when the thin razor-like blade of my round-bladed knife has just gone through the cartilage without entering the mucosa-periosteum of the opposite naris. I no longer place the little finger in the latter in order to feel for the edge of the knife when making the first cut through the cartilage. In doing this the finger presses the mucosa-perichondrium of the naris of the concavity against the edge of the knife and so favors its unwelcome division by the blade; holding the finger in the nostril also divides the operator's attention, and requires an awkward crossing of hands when one operates in the right naris unless one cuts with the usually unskilful left hand. Where no finger is inserted, the mucosa by reason of its elasticity and frequently loose attachment on the concave side, is able in a sufficient degree to evade the cutting edge, to save its being incised if one cuts cautiously. Nevertheless I agree with Dr. Kenyon, that the first cut in the cartilage, though it does not cause the experienced operator apprehension, is a source of dread to the one who has not educated his sense of the penetration of the knife into the cartilage and it is possible that Dr. Kenyon's hollow blade will prove an aid to the unpracticed. Personally, of course I feel like adhering to the methods I am used to, and I find that my sense of direction and penetration is most exact when I make the motions in cutting as simple and direct as possible, with a flat, thin, round edged, straight blade without confusing curves. I cut straight through the cartilage vertically to its surface or at the most at an angle of 45 degrees, the edge of the knife looking towards the back of the nares. For those of moderate experience it is well to cut through with several strokes of the knife, feeling from time to time with the thin edged dulled spatula elevator in the incision being made through the cartilage, whether at some point the latter has been divided all of the way through, so that the blade of the spatula may be inserted under the posterior edge of the slit in the cartilage so created in order to lift it for seizure with the rat-toothed forceps. When this is done the operator can judge by sight what thickness of cartilage he is cutting through.

I have increased the extent of my first cut through the cartilage, my old incision, which follows the direction of the dorsum of the nose, being joined at the bottom of the septum by a short horizontal one, so that a tongue of cartilage is thus outlined with its apex forwards. When this is uplifted from the mucosa of the concavity it gives so much room for further separation so that I no longer find it necessary to watch the elevation of the mucous membrane of the concave side from the nostril of the concavity of the deflection.

Experience may prove Dr. Kenyon's knife a very useful addition to the instrumentarium of the window resection for certain cases, in fact there is so much variation from the usual in many of the deviations encountered that one is continually finding that some unusual instru-

ment fits some unusual case, a reason for the multiplicity of my instruments.

I take this opportunity to refer to an instrument which I have recently described in *Fraenkel's Archiv fuer Laryngologie*. It is my modification of Gruenwald's punch forceps and a number of the members present have already seen it. Instead of the scissors handle of the original Gruenwald forceps my modification has a forceps handle which gives it great power, as the strength of the whole hand can be used in closing the blades. The latter instead of opening up and down as in the original instrument, open laterally, a direction suited to the position of the septum. In spite of the great power of the instrument, none of the slenderness and length of the parts that enter the nose have been sacrificed. I have cut through bone one-eighth of an inch thick with the jaws of this forceps as easily as one can cut cartilage with other patterns and it is possible with it to extirpate a bony deviation completely piece by piece. Even the strong crista incisiva may be trimmed off with it.

In contrast to it the Hartmann punch forceps used by Killian is far too weak to cut through much of the bone that I have encountered. The Jansen-Middleton-Hajak punch forceps is able to cut heavy bone in the septum but can not be used with accuracy farther back in the naris than $1\frac{1}{2}$ inches, because of the thick sockets of the blades which can not enter the naris and which hide the view as soon as they approach it closely. I have repeatedly had to excise portions of the vomer at a depth of from $2\frac{1}{2}$ to 3 inches in the nasal cavity, measuring from the entrance of the nostril, and both Gruenwald's original forceps and my modification of it easily reach the posterior border of the vomer.

Dr. Kenyon (closing the discussion): I think we all feel inclined to concede to Dr. Freer an unusual skill in the performance of the steps connected with this operation. I have no doubt that Dr. Freer is capable by his own method of making this first incision with a degree of certainty possibly greater than that which I would feel even with the knife and method I have suggested tonight. But the idea which I had in mind was to do away with the demand for an extreme delicacy of manipulative touch, which, I fear, can be sufficiently developed only through the performance of a great many operations. With the aid of this knife and particularly since in its use the eye is enabled to aid the hand, I believe this purpose to be accomplished. And if this be true, a real service has been performed for the great majority of operators.

So far as Dr. Freer's modification of the Gruenwald forceps is concerned, I have used this instrument four or five times, and have found it of the utmost service in connection with the operation.

TECHNIQUE OF MECHANICAL MASSAGE IN THE TREATMENT OF THE THROAT, NOSE AND EAR.*

By Moreau Roberts Brown, M. D.

Fellow of the Americal Laryngological Association, Professor of Rhino-Laryngology in the Chicago Polyclinic, etc., Chicago, Ill.

In his work on Massage, Graham says (page 451): "When some of those distinguished gentlemen have invented a machine that can massage not only the ear but also the side of the head and neck as well as can be done by the human hand, then we will hear still better reports of the effects of massage in aural troubles." Whether the perfected instrument referred to has or has not yet been invented I am not prepared to assert; but I do affirm that the result of treatment by vibrassage, as I have used it in many diseases not only of the ear but also of the nose and throat during the past three years, is superior to that reported to have followed manual massage or in fact any other form of massage in vogue. As this success is to be attributed to the technique employed (much of which was originally suggested to me by that master masseur, Hugo Ad. Oldenborg, G. D., of this city), I have considered it of sufficient importance to embody it in a brief article without any attempt whatsoever at a scientific discussion of the subject. But it must be understood that massage, as herein advocated, is not considered a specific nor is it used to the exclusion of other well recognized treatment but in connection with it.

The general physician must not expect to accomplish with manual massage or even vibratory massage all that an educated and properly trained masseur does in the general treatment of the body, but he can successfully combat with a properly constructed vibrator, the use of which he is familiar, certain local pathological conditions. I have no hesitancy in saying that in diseases of the ear and nose even better results are obtained by mechanical massage, owing to the more complete vibration imparted by it to the hard, unyielding bony walls than by manual massage, the effect of which on these organs is but slight.

Massage, as is well known, comes to us from ancient times, having been mentioned by Homer, who, with more recent authors, refers to its employment principally as a luxury and as a means to invigorate the body. Although it was occasionally advocated as a therapeutic agent, it was not until Ling introduced it into Sweden in 1813 that it was used in a scientific manner. Mechanical vibration, which is its outgrowth, was first physiologically studied, according to Schrieber, by Von Mosengeil, in 1876 (see Snow on Mechanical Vibration).

Possibly the Delstanche Masseur and Siegel's Otoscope were the first instruments used especially for aural massage. The Delstanche instrument was improved upon from time to time and many different forms of massage otoscopes

were presented until we have today a perfected air-pump masseur modeled somewhat after and an improvement on the Philadelphia Ear Masseuseur or the Chevalier Jackson instrument. Other instruments have been designed for massaging the interior of the ear, the throat or the nose; that devised by Dr. J. Mount Bleyer of New York for intranasal vibration, owing to the favorable results obtained and reported by him, being most entitled to mention.

The number of articles and books written on massage within recent years, the number of people engaged in its application as a means of livelihood and the variety of machines devised for its mechanical application, many of which now form the armamentarium of the physician's office, bear witness to its general utility.

It is universally conceded that, by increasing the circulation through the lymph and blood vessels, massage relieves acute inflammation, and when the inflammation has come to a standstill or becomes chronic, by the same means it rouses the dormant capillaries, furthers absorption and stimulates the vaso-motor nerves. Some (Kleen, et al.) consider that the "cellular elements in the more or less organized products of inflammation are induced to undergo fatty metamorphosis and become disorganized. The little particles are taken up and carried away by the lymph vessels." Billroth claims that in hyperplastic tissue "impervious blood and lymph vessels may be opened and absorption of the adventitious tissue promoted." Massage restores muscular action, increases glandular secretions, releases nerves from the neighboring tissues that compress them, nourishes and strengthens exhausted nerves and improves their function. The degree to which this is done depends on the extent of the pathological changes, and it must not be overlooked that improved nutrition and improved function of nerves will not so soon follow as in the case of muscles, and that excessive massage or stimulation may abolish their activity.

It is essential for success that the instrument employed in mechanical massage be suited, by virtue of the character of its vibrations, to the parts to be massaged and adapted to the relief of the pathological changes to be overcome, just as it is essential in manual massage for the masseur to understand when to employ effleurage or other of the various movements necessary for the success of his art. For ear, nasal or laryngeal vibrassage, the vibrator, generally driven by an electric motor, must be of that type which imparts a circular or wave-like motion such as is obtained by fastening the vibratode on the end of the handle of either of the instruments referred to below. No other motion will give the same results, the downward or hammer-like stroke not being suited to the work in question. The vibrations must be as short and the speed as moderate as is possible, though at times the highest speed will be required to secure the desired effect. Just exactly what this is it is not possible to state, for no instrument yet made is provided with a scale to indicate either the length of the stroke (vibrations) or the speed given or required. In a

general way, however, it may be stated that in using the instrument made by Messrs. Truax, Greene & Co., the weight in the handle which creates the vibrations should be screwed down to its fullest extent, and that with the vibrator made by the Victor Company the weight is turned out to a point where the vibrations are slight but distinct, as can be determined by the operator on placing the vibrator against his own face. The pressure must be but moderate and the vibratode should be of the bell shaped variety made of soft rubber, perfectly pliable and of a diameter at the distal end of from 1½ to 2 inches.

Massage of the throat, nose and ear should begin by treatment of the neck, the vibratode being passed from above downward over the muscles of the back and the sides of the neck. The facility with which we are enabled to press the fingers down between the muscles renders the hand, used as described below, a most desirable vibratode for massaging the neck; or a vibrator giving the hammer-like stroke can be used here with advantage. To reach the pharynx the vibratode is placed below the angle of the jaw and in front of the sterno-cleido-mastoid muscle and pressed inward and backward. The patient should be carefully watched during the first few treatments, as evidence of approaching syncope has been noticed several times while vibrating over the region of the Vagus nerve.

The larynx is treated by gently grasping the thyroid cartilage on the outside between the forefinger and thumb which are vibrated by the vibratode held firmly, somewhat like a penholder, well up in the crotch, between the forefinger and thumb. In vibrassage of the nose the soft rubber cup vibratode is passed downward over that organ, and on the neighboring sides of the face and above on the forehead. In ear vibrassage the soft rubber cup is passed downward in front of the ear, then behind the ear and over the mastoid and over the space between the mastoid and the angle of the lower jaw, after which it is placed directly over the ear so as to cover the external auditory meatus. In these positions it vibrates the more superficial parts of the ear; in order to reach the deeper portions of the ear and the eustachian tube the vibratode must be taken between the forefinger and thumb as has been described, and the tip of the forefinger which now becomes the vibratode, should be put in the orifice of the external auditory canal.

Another method of vibrating the hand of the operator is with a metal band made to fit over the hand like a sailor's leather palm for sewing or with a ring fitting the forefinger, attached to the vibrator handle. A soft rubber vibratode shaped like the end of the finger can be used for vibrating the ear but I do not consider either of these devices equal to the method just described.

It is strongly urged that the novice in this work first operate on himself, that he may obtain a true significance of the vibrations before

*These instruments are the ones selected by me as properly adapted to the work under consideration.

attempting the treatment of his patients, otherwise he might do them irreparable injury.

The duration of the treatment must not be prolonged beyond the point of stimulation to that of exhaustion. The sensations of the patient and the state of the affected parts generally will indicate the limit. For the first treatment of the ear, for example, three minutes is ample time to be consumed, including that devoted to the neck. As to frequency, some cases require more frequent treatment than others; the decided indication for a renewal of treatment is manifestation of a return of the symptoms which have been dissipated by the vibrassage as is observed at times in acute conditions. In acute disorders daily treatments are required. After the more acute symptoms have disappeared every other day may be found sufficient, and in chronic conditions every other day is the rule; but should the slightest evidence be noticed that the treatment is causing an aggravation of the symptoms the massage should be discontinued, and if improvement does not follow within three or four weeks from the time of beginning it I do not think it advisable to prolong it.

"The shorter the time which has elapsed since the inflammation was acute the more rapidly will it yield to massage, or in other words, we can massage away fresher exudate with greater ease than we can the older." This, however, should not discourage us in the treatment of chronic cases, particularly when we remember how completely residues of long standing may sometimes be removed.

The indications for the use of massage in diseases of the throat, nose and ear are the same as they are for other parts of the body; namely, for the relief of neuralgia, rheumatism, paralysis, enlarged glands which accompany or follow some forms of tonsillitis and (owing to its well known antiphlogistic value and the rapidity with which it removes exudations) acute and chronic non-suppurative inflammatory affections.

Its use in diseases of the nose is limited. It will relieve nasal stenosis due to engorgement of the inferior turbinals but not to that extent and thoroughness reported by Bleyer as following his method of intranasal vibration. In dry rhinitis it will increase the moisture in the nose and it will relieve the intense pain we occasionally encounter over the bridge of the nose extending up over the forehead in certain intranasal inflammatory disorders. It is indicated in acute pharyngitis, non-suppurative and non-membranous, in its many forms, such as is manifested by inflammation of the deeper tissue and of the mucous membranes covering the various anatomical regions in question. In chronic pharyngitis it is likewise of value, particularly in that form known as "pharyngitis sicca," as it will restore the membrane to its normal moisture unless the pathological changes are too great, which however we must understand will not prove permanent should the accompanying intranasal disorder not be rectified.

In pharyngeal paralysis following some acute inflammatory diseases of the pharynx we have

a remedy in mechanical massage of unsurpassed value, and the same may be said of it in its use in those affections dependent on the rheumatic diathesis.

Its use in the larynx is probably limited to the treatment of some forms of paralysis, to acute laryngitis due generally to "catching cold" and to the more chronic form of the same disorder so often met with in the professional voice users—singers, public speakers and others.

Referring again to Graham we find on page 448 the statement, "In otology less than in any branch of medicine has massage been found necessary." Graham speaks advisedly and evidently in accordance with his own experience. Being well versed in manual massage and, as we assume, having but little, if any, experience in vibratory massage as here advocated in the treatment of aural diseases, he had learned that, owing to the hard, bony walls in which the ear is encased, its deeper structures could not be influenced except for a certain distance around the point of massage but not to the extent required to relieve deep seated ear lesions. In other words, Graham found ear massage unnecessary, as I take it, because he was unable to get satisfactory results from manual massage. On the other hand, there is scarcely a recent writer on otology or on mechanical massage who does not recognize the value of the latter in the treatment of diseases of ear. Hommel, whose article is one of the most complete on the subject, highly commends its use and gives rather minute description of the conditions in which it should be employed, but my own experience is that, however diligent I was in its employment, the results were not as satisfactory as I had expected until I succeeded in vibrating the parts more thoroughly, as has been herein described.

From the foregoing statement it would, therefore, be but natural to expect that one would be able to massage away the greater part of, if not all, pathological changes found in the middle ear tract due to inflammatory processes, and in this we will not be disappointed provided we do not expect to accomplish more with vibrassage in the ear than experience has proven it capable of doing in other parts of the body. As to breaking up adhesions of the membrani tympani and rigidity of the ossicles, vibrassage compares favorably with pneumomassage which has for some time occupied a foremost position for this purpose in the minds of many otologists and which in my opinion has been much overrated. With pneumomassage one can impart to the membrani tympani a to and fro motion which will break up adhesions but its injudicious use is apt to create too much relaxation; its effect on the rigid ossicles is not so satisfactory as we are sometimes led to expect, nor can we with it massage the middle ear, which is so essential for the ultimate success of treatment, as can be done with the vibrators; therefore its value as a therapeutic agent is but limited.

Omitting a description of the causes, symptoms, pathological changes, etc., of the various diseases of the ear treated, let the general state-

ment suffice that vibratory massage is successfully used for the relief of otalgia, tinnitus, nervous deafness, all acute and chronic catarrhal, non-suppurative inflammations of the auditory tract, and suppurative otitis after the suppuration has ceased; that is to say, of a great majority of all diseases of the ear which we are called on to treat. Its benefits are more particularly noticeable in otitis media acuta characterized by an acute attack of impaired hearing, tinnitus, sense of fullness in the ear, and sometimes pain; and in otitis media chronica characterized by a more or less continued full feeling of the ear, muffled voice, abnormal sounds, impaired hearing often aggravated on catching cold; both conditions being accompa-

nied by the usual pathological changes in the membrani tympani, etc. My records show cases of acute, subacute and chronic otitis media, at times accompanied with marked deafness and in the chronic form with deficient bone conduction, some having resisted the generally recognized treatment of such disorders which recovered rapidly under mechanical massage; also cases of obstruction of the eustachian tube from catching cold which were promptly relieved and the tendency to recurrence checked; thus demonstrating the thoroughness with which the ear, including the pharyngeal orifice of the eustachian tube, can be vibrated.

34 Washington Street.

County and District Societies.

ADAMS COUNTY MEDICAL SOCIETY.

Regular meetings held in Quincy the second Monday of each month at 2 p. m. Membership 70.

Officers.

President.....Jno. A. Koch, Quincy
First Vice Pres.....J. M. Grimes, Camp Point
Second Vice Pres.....H. Hart, Quincy
Secretary.....Geo. E. Rosenthal, Quincy
Treasurer.....R. J. Christie, Quincy
Censors—Jos. Robbins, L. B. Ashton, E. B. Montgomery, Quincy.

Delegate to the State Society, L. H. A. Nickerson, Quincy.

Alternate to the State Society, R. J. Christie, Jr., Quincy.

The regular monthly meeting of the Society was held May 8th at Quincy with President Koch in the chair.

Those present were Drs. Ashton, Christie, Ericson, Gilbert, Knox, Koch, Nickerson, Knapheide, Noakes, Nichols, Pfeiffer, Rosenthal, Robbins, Worley, Wessels, Williams, W. W., and Williams, G. G.

Routine business was transacted and the Legislative Committee was ordered to interview the mayor for the purpose of securing a representation on the local board of health for the profession.

Dr. Rosenthal presented a paper on **Senile Arteriosclerosis**.

Adjournment.

CHRISTIAN COUNTY MEDICAL SOCIETY.

Regular meetings are held at Taylorville quarterly. Membership 20.

Officers.

President.....C. L. Carroll, Taylorville
1st Vice-President.....C. W. Coe, Stonington
2d Vice-Pres.....M. M. Reasoner, Morrisonville
Secretary-Treasurer.....D. F. Morton, Taylorville
Delegate.....F. E. North, Taylorville
Alternate.....M. M. Reasoner, Morrisonville
board of Censors: M. M. Hill, G. Armstrong and F. E. North.

The Christian County Medical Society met in regular session in the City Hall, Taylorville,

Thursday, April 20, 1905, President Bridges in the chair.

Papers: **Etiology, Pathology, Symptoms and Diagnosis of Typhoid Fever**, G. L. Armstrong, M. D., Taylorville.

The essayist read a very creditable paper, reviewing the symptoms and etiology of Typhoid fever.

The pathology of Typhoid was given in detail to the most minute change, serving to illustrate the intestinal lesions and complications which may present that conflict from the typical case record.

In the diagnosis of Typhoid, special stress was given to the importance of the Widal test, also pointing out some of the fallacies of this test.

Clinical records of cases were shown which proved that the Widal test was positive in most cases, after the 7th day; one case in particular in which the Widal was positive only after 21 days.

Credit was given to the present State Board of Health for their placing at the disposal of physicians of Illinois, the Illinois State Board of Health Laboratory at Springfield.

The above laboratory enables one not conversant with the finer details and practical work, the opportunity of using the Widal test and yet not be bothered by the loss of time which it would require to make the test.

The discussion which followed tended to show that Eberth Bacillus infection was a self limited condition; that intelligent nursing, proper diet, hydrotherapy and hygiene gave the largest percentages of complete recovery. Medicine being a second consideration, although a necessary one.

Drs. Barr of Taylorville and F. J. Eberspacher of Pana were elected to membership.

The above officers were elected for the following year.

CRAWFORD COUNTY MEDICAL SOCIETY.

Regular meetings are held bi-monthly on the second Thursday. Membership 24.

Officers.

President Dr. Frank Dunham, Robinson
 Secretary Dr. H. N. Rafferty, Robinson
 Treasurer Dr. C. Barlow, Robinson

The Crawford County Medical Society met in regular session at the office of Dr. Frank Dunham, in Robinson, on Thursday, May 11, 1905.

The following members were present, viz.: T. N. Rafferty, Firebaugh, Fuller, Dunham, A. G. Meserve, Newlin, Price, Cooley, Kirk, Midgett, Mitchell, Barlow, and H. N. Rafferty.

Dr. John Ikemire, of Palestine, was present as a visitor.

The minutes of the previous meeting were read and approved, after which the rules were temporarily suspended, and Dr. Ikemire was elected to membership in the Society.

The first paper of the session was presented by Dr. LeRoy Newlin, his subject being **Abortion**. Dr. Newlin dealt with this subject in a masterly manner, not confining himself to textbook statements, but giving his own general conclusions, and preferences regarding treatment.

The discussion of this subject was opened by Dr. I. L. Firebaugh, followed by all of the members present.

Firebaugh emphasized the importance of syphilis as an etiological factor in women subject to habitual abortion, also the need of complete rest in bed in cases of threatened abortion.

T. N. Rafferty believed that the key-note in the successful treatment of abortion was a complete and aseptic emptying of the uterus.

A. G. Meserve, in speaking of the tampon, cautioned against its use after the fourth month on account of the danger of concealed hemorrhage.

G. W. Taylor thought he had seen as many cases of abortion in his practice as labors at term. Frank Dunham believed the ratio between his cases of abortion and labors at term was probably as three to one.

Dr. J. W. Kirk, of Oblong, read a concise and interesting paper on **Erysipelas**, paying particular attention to the serum treatment. The author stated that he had never been able to accomplish anything by the older methods of treatment, but that he believed we now have a specific in the Anti-Streptococcic Serum.

This subject was discussed by all present, although only a few had used the serum treatment. Erysipelas seems to be quite common in some portions of our county, while the physicians in other portions are hardly acquainted with it of late years.

Dr. C. Barlow read a very complete paper on **The Prophylaxis of Typhoid Fever**. The discussion of this subject was opened by Dr. Mitchell, and was participated in by most of those present.

There seemed to be a general idea that the rules of prophylaxis could be rigidly carried out only with the co-operation of a competent trained nurse.

At the request of the Society, Dr. Fuller read his paper on **Auto-Intoxication vs. Malaria**. This paper was well received, being discussed by several members, each emphasizing the importance and frequency of auto-toxaemias.

Dr. H. N. Rafferty presented a specimen of a uterus removed per vaginam, which exhibited a malignant degeneration of the cervix, with a large sub-mucous fibroid of the fundus. The patient's convalescence was satisfactory up to the beginning of the sixth week, when she was suddenly seized with dyspnoea and pain in the chest, and died in a short time—probably from one or more pulmonary emboli.

Dr. Rafferty also showed the ovaries removed from a woman of 32 years, who had suffered with a diffuse pelvic inflammation following child-birth. The right ovary had an abscess cavity which had contained two drachms of thick pus, while the left one showed a hematocele of about the same size.

The secretary reported that he had received a dozen containers for sputum, from the secretary of the State Board of Health, and that the same were for distribution among the physicians of the county.

The specimens are to be sent to the bacteriological laboratory of the board by mail, where the examination will be made and the report sent to the physician, free of expense.

On motion, the Society adjourned, to meet the second Thursday in July, at which time the twenty-fifth anniversary of the Society will be celebrated by an extra program, and a banquet in the evening.

GALLATIN COUNTY MEDICAL SOCIETY.

Regular meetings are held monthly on the second Wednesday. Membership, 65.

Officers.

President.....F. A. Jones, Ridgeway
 Vice President.....I. A. Foster, New Haven
 Sec. and Treas....J. W. Bowling, Shawneetown

At the Shawneetown meeting in April Dr. F. A. Jones of Ridgeway was elected President, I. A. Foster of New Haven Vice President, and Dr. J. W. Bowling of Shawneetown Secretary and Treasurer.

Our Society met at New Haven Wednesday, May 10, at Masonic Hall. In the absence of President Jones, Dr. Foster presided. The following members were present: Drs. I. A. Foster and John Barnett of New Haven, Dr. W. E. McGuire of Cottonwood and Drs. W. H. Grattan, A. B. Capel, Paul Sherman and J. W. Bowling of Shawneetown.

An interesting paper was read on **Membranous Croup** by Dr. McGuire and discussed by all members present.

Some minor business was transacted by the Society.

Drs. Barnett, McGuire and Grattan were appointed to prepare a program for next meeting, which will be held at Shawneetown Wednesday, June 14, at 4 p. m. and at night. Every physician in the county is requested to attend this

meeting, as several papers of interest will be read and discussed.

At the April election Dr. I. A. Foster was elected mayor of New Haven.

Dr. John Barnett was elected supervisor of New Haven township.

MACOUPIN COUNTY MEDICAL SOCIETY.

Regular meetings are held semi-annually the third Tuesday of April and October. Membership 40.

Officers.

President S. A. Huffman, Chesterfield
Vice President E. A. Bleuler, Carlinville
Secretary-Treas. J. Palmer Matthews, Carlinville

The Macoupin County Medical Society met in the Masonic reading room at 11 a. m., April 25, 1905, with Dr. E. A. Bleuler, of Carlinville, in the chair.

Roll call was answered by the following members: Drs. J. M. Barcus, E. A. Bleuler, J. S. Collins, J. P. Denby, S. H. Corr, C. J. C. Fischer, John P. and J. Palmer Matthews, all of Carlinville; G. E. Hill, R. S. Cowan, and R. J. Mitchell, of Girard, and J. W. Thompson, of Nilwood.

Minutes of preceding meeting were read and approved.

The Treasurer's report showed \$3.25 in the treasury.

The Censors reported:

For President—E. A. Bleuler, Carlinville.

Vice President—E. K. Lockwood, Virden.

Secretary-Treasurer—J. Palmer Matthews, Carlinville.

Next place of meeting—Virden.

Essayists—C. A. Allen, of Virden; W. B. Dalton, Scottville; A. G. Kinkead, Greenfield.

Signed: Drs. Fischer, Denby and Barcus, Censors.

The report was adopted on motion of Dr. John P. Matthews.

Afternoon Session: Dr. Collins made a report of a case of **Parenchymatous Nephritis, following Scarlet Fever**. Albuminurea and pyuria was found to clear up and recur intermittently.

Dr. Black, in the discussion, said: All remedies are palliative. Stripping the capsule from the kidney simply relieves the congestion of the vasa vasorum in the glomeruli of the kidney, forestalling degeneration.

Dr. Carl Black, of Jacksonville, addressed our Society as Councillor from District No. 6. He spoke of the benefits of the Society organization to the members collectively and individually. He disparaged rivalry in price cutting, sending cases out of town, and then skinned doctors who take offense when their opinion is questioned. Rivalry should be encouraged in purchase of journals, and up-to-date instruments and an occasional post graduate course in New York.

Come, again, Doctor, next year!

Dr. John P. Matthews read an essay on **Rheumatism**. The term rheumatism is from the Greek verb rheo, to flow. The doctrine of Hippocrates and Galen was that the morbid condition or cachesia which favors the development of such fluxes is rheumatism. Galen thought that in any morbid condition the quantity of nutriment supplied to a part is greater than it is able to assimilate—the surplus may undergo un-

healthy changes and the phlegm or excrementitious humor which results would produce morbid alterations in the parts. If it remained it was often driven by so-called "expelling faculty" to other parts of the body, through the blood vessels, pores or passages of the body. This with the Hippocratic idea that all fluxes, diarrhoeal or catarrhal, are included in the term give origin to the name rheumatism. The word illy describes the pathology now described, except rheumatic fever with its fluxes into the synovial and cardiac cavities.

The wordy warfare between Bastian and Pasteur over the spontaneity of generation within our own recollection gave the Great Lister the thought that the danger from all surgical cases came from without. And the great Tyndall proved by his beef juice cultures that the germs of disease were ever present when its receptacles were left uncovered.

This left such observers as Klebs, Eberth, Koch and others to give to the astonished medical world the belief that all infectious diseases were at least of germ origin. Here history will forever record the great step forward in medical history. This step was opposed bitterly by many old teachers who stuck to their old theories that were hard to explain. Such excellent men as the late Nestor of the A. M. A. fought fiercely for years the germ theory and well does your essayist remember the battle royal on the floor of the Association at New Orleans between him and the late James T. Whittaker, of Cincinnati.

The history of rheumatism is the history of medicine. It is the opprobrium medicinae of the profession. Since the ages of Hippocrates and Galen, Celsus, Sydenham to Virchow.

It has passed through the scrutiny of naturalism, empiricism, humoralism, solidism, neuropathology, phlogisticism, and vitalism, down to the great author of cellular pathology.

History will forever record the step from cellular pathology to the germ theory of disease. The best argument of the germ theory advanced by the old and revered teachers was found in the fact that chronic rheumatism was a complaint in which germs could not be found, and that the inflammatory type only could be thought to resemble germ infection. While bacteriologists were at work all over the land experimenting with cultures from the blood of lower animals to give medical thought another step in history, Haig, of London, Eng., was experimenting on himself to find out the cause of a painful migraine from which he had suffered for several years and that medicaments only temporarily relieved. Careful examination of his own secretions convinced him that too great abundance of proteid food with tea, coffee, etc., figured largely in the cause of the migraine by overwhelming excretions and producing some failure of the metabolic activity of the liver, skin and kidneys, causing the urea to become unoxidized, and uric acid formed. This Haig found conclusively to be the cause of his migraine.

His work on uric acid in disease, together with Bouchard's great work on auto-intoxication, your essayist fully believes, deserves much more consideration at the hands of the united profession than it receives.

Pardon is asked if it be said that the trouble with our medical book makers is that they find a David with his little sling shot to down any Goliath in medicine who may appear at the front. Because proprietary medical firms exploit uric acid as the cause of all diseases gives poor reason for saying it does not produce any; that it is not uric acid but aloxuric or purin bases, Xanthin, Hypoxanthin, etc., that does.

Over forty years' study and observation as well as experimentation on myself have proven to me that the human family are divided into three types or diatheses, which for brevity may be called acid, neutral and alkaline. In an essay read to this Society in Modesto ten years ago on pulmonary tuberculosis, I took the advanced ground that the disease was not hereditary but the diathesis was. The acid diathesis is inimical to the attacks from the tubercle bacillus. Another observation in the same essay was that pulmonary tuberculosis never followed croupous or lobar pneumonia because it belonged to the acid diathesis, but that lobular or bronchial pneumonia belonged to the alkaline diathesis, and for this reason required the watchful care of the physician to ward off the tubercular attack.

Ground was also taken that scrofula belonged to the alkaline diathesis. After cold, la grippe or lobular pneumonia bronchial gland involvement produced the nidus for the bacillary attack, thereby proving scrofulosis to be undoubtedly an hereditary disease. This is the reason for the popular belief that tubercular consumption is hereditary, where scrofulosis is the undoubted affection that produces it. This reasoning has helped the essayist in the treatment of the chronic diseases classed in the two diatheses causing more careful selection of the remedies for the conditions found. It should give the younger members food for thought. All old authors speak of strumous diatheses, and Watkins' works of forty years ago, before Koch's discoveries, blended scrofulosis and tuberculosis so that it was hard for the student to separate them. All writers agreed that they were hereditary and none expressed a doubt of the heredity of the gouty or lithemic diathesis. The etiology of rheumatism is an auto-intoxication. The difference between this and ptomaine poisoning is that the leucomanias of the aloxin or purin bases and uric acid are a result of a faulty hepatic metabolism of proteid digestion. Uric acid is an unoxidized urea and is retained in excess within the organism when proteids are taken as food in excess of what the liver can oxidize, giving rise to a dyspeptic condition, which usually precedes all attacks. The derangement of the vital chemical functions causes a faulty elimination of the products of such metabolism, resulting in auto-intoxication.

Urea has the formula of CoH_2N_4 , with a normal relation to uric acid in formation of about 35 to 1. While the aloins or purin bases—that our own Billings believes to be the factor while combatting the Haig theory—has the difference only that each has less oxygen in its composition.

This proves pretty conclusively that when uric acid is in excess it is caused by impaired

oxidative powers of the liver in transforming food products. The auto-intoxication of the body as a whole and of certain tissues found affected is a result of defective metabolism in the vital chemical functions of the system.

When the kidneys fail to eliminate urea from overwork, it becomes an irritant poison, causing uremia and death with convulsions.

When not sufficient to cause such dire consequences, it presents symptoms found in those who worship at the shrine of Bacchus. I have given it the name of American gout. I do not doubt the greatest tendency to appendicitis of late is due to the increased amount of animal food used in the last decade in the United States. Cider, wine, beer and beef caused the British great toe to ache, which condition has been transferred to the appendix and intestines of the American meat eater. The kidneys filter the blood of urea and uric acid and become so inflamed that when uric acid is irritating it causes forms of nephritis in the lithemia.

Whether Professor Bouchard's claims are true that uric acid is derived from the neuclein of the white blood cells or that it results from nuclear destruction of tissues, xanthin, hypoxanthin, adema and granin constitute nuclear bases. They are nitrogenous and are derived from the nitrogen of the food ingested. These nuclear bases vary little from each other chemically and have a close relationship with uric acid and its formula $\text{C}_5\text{H}_4\text{N}_4$. They are also called purin bases.

Professor Billings contends that these and not uric acid are the offenders, and objects to Haig's theory as a consequence.

The etiology of rheumatism is faulty hepatic metabolism of nitrogenous ingesta, and acid dyspepsia results with an unoxidized urea and auto-toxemia.

Pathology: In the acute form the fever is due to a micro-organism. This seems true from its resemblance to the gonorrheal form, which is certainly due to toxins of the gonococcus. The toxins must result from the micro-organism of lactic acid fermentation, and has a specific selection for the synovia and pericardium. Later in life the vegetations of the endocardium desert their resting place for the cerebral arteries, causing embolism. Other pathological results of the acute form are permanent roughness of the articular surfaces involved with crackling of the joints on motion. This differs so much from biurate of soda tophi in rheumatoid arthritis which are deposited around them, forming nodules which produce the deformities. The more chronic results to the lithemic are lumbago, pharyngitis, pleurodemia and rheumatic-itis and sciatica.

Gout of the stomach and intestines is an American gout, and while a little more acute has the same etiological factors as the great toe disease of our English cousins. This includes all forms of acute dyspepsia, especially hyperchlorhydria.

Old men by their aches prior to a meteorological change claim to foretell a storm. A low barometer causes the rhumatic pains by changing the normal pressure on the nerve endings, rendered sensitive by urates in the tissues.

The diagnosis of chronic rheumatism and gout is extremely difficult to differentiate. The acute form in the young, before the age of 30, with its fever and sweats and tendency to attack serous membranes, is not hard to distinguish from gout with its inflammation of the great toe joint. But in sub-acute affections of joints before tophi begin to form it is hard to differentiate.

The subjects of the acute forms are prone to attacks of gout in after life. Ben Franklin described in a letter to a friend most vividly after one of his gouty fits. These painful fits are like in kind, differing only in degree and location from acute attacks of gouty rheumatism or if you please lithemic pharyngitis, acute dyspepsia, gastralgia, iritis or synovitis.

The symptoms and nature of which vary in different individuals and are supposed to depend on individual predisposition. The most obvious are digestive and hepatic disorders, attended with marked flatulence, eructation, heartburn, acidity, constipation, in short, auto-intoxication.

Cohen of Philadelphia labored hard in an essay to the Pan-American Congress to differentiate a lithemic pharyngitis called gouty from a rheumatic case. The same might be said of lithemic iritis. Shoemaker in his clinics calls gouty tophi in the joints rheumatoid arthritis, but where the tophi are not present and instead a roughening and destruction of articulating cartilages and contracted tendons he calls arthritis deformans.

There are different manifestations of chronic lithemia—call them what you will!

The prognosis of that form dependent on faulty elimination of urates is favorable. The so-called American gout where the emunctories have become overtaxed and the urea overwhelms the nerve centers, causing uremic convulsions, is a more serious matter. I wish to warn the younger members that a bilious attack is a mild uremia. Prognosis of endocarditis should be guarded.

The treatment of rheumatism has proven to be the bete-noire of our profession, especially the chronic forms. When the time comes that young men are sent out from the medical schools with a better equipped knowledge of the therapeutics and pathology of this subject instead of so much attention to a sepsis, antiseptics, the scalpel and curette we shall have less talk among the lay of incurability of rheumatism. And we will find fewer devotees to the fads of homeopathy, osteopathy, mental and christian science, et id genus omni, which are only a suggestive and only a form of mechanical therapeutics. A case apropos: A man well up in years drove to the office on whom osteopathy, Hot Springs and other fads had failed. He could not walk without crutches. Was well fed, convivial, had his daily toddies as well as abundance of meat, tea and coffee. He said: "Doctor, can you do anything for this blanked rheumatism?" The answer was: "Yes, it is as amenable to treatment as any other ailment provided it has caused no organic lesions. You will have to live up to a strict dietary or no medicines known to the profession will do you good." His reply was: "I'll

be blanked if I cheat my stomach the remainder of my days!" and he drove away.

One should refuse to treat patients who will not restrict their diet. For your reputation will suffer and they will fly to the fads of rubbing and osteopathy.

That rheumatism is an acute toxemia was proven to me by two cases early in my practice. While on crutches from a three months' siege that followed acute dysentery and while in charge of the regimental hospital of the 122nd regiment at Corinth, Miss., a soldier was brought in with high fever, the joints of extremities swollen to the full capacity, the excessive pain eliciting the greatest sympathy from his comrades who attended him. The meagre pharmacy supplied by the government was blue mass, opium and colchicum to treat the case. A pill of colchicum was given, alternating with blue mass. The drug was poor in quality, so the dose was doubled and the time shortened from four to two hours. During the night an emeto-cathartic effect occurred. The amount of material that passed both ways astonished the attendants! The result was equally astounding, when on the fourth day the soldier was out and bantered his surgeon for a foot race. He was on crutches himself and could not accept!

Case 2, in Carlinville, a few years later: Mr. B, hotel clerk, was threatened with a second attack of fever and swollen joints which had been diagnosed by an eclectic as spinal meningitis. After giving him calomel, leptandrin and soda with sufficiently large dose of podophyllin to produce an emeto-cathartic effect, his expected three months' spell only lasted three days. He said: "I did not believe it possible to live with so much rubbish in me!" These experiences have been mentors of a rule to clean out, clean up and keep clean the alimentary canal.

Today the treatment of rheumatism is salicylic acid and its compounds, which simply allay pain and reduce fever through the antiseptic effect on the alimentary canal. It destroys fermentation, which is the cause of rheumatism, and it certainly is, as the books call it the anti-rheumatic remedy. The book makers, who do not practice medicine, hand down the farce from Sydenham's time that chorea is rheumatic, and recommend arsenic as its anti-rheumatic treatment. Let me protest that chorea is a neurotic disease for which arsenic is a remedy.

If my researches are correct, the faulty hepatic metabolism needs something in the shape of a better alterative than salicylates to correct the evil. The salicylates, electricity, hot baths, hot air, and strict attention to all the eliminative organs are indicated. On the principle of withholding all saccharine and starchy foods in diabetic cases, with good results it must follow as an axiom that to intelligently treat lithemia the proteid ingesta should also be eliminated.

Salt should be withheld in hyperchlorhydria. This, with carefully endeavoring to keep the emunctories open, liver, skin, and kidneys, you will fulfill the requirements of the great trust imposed upon you by your suffering patients in the treatment of this disease.

A vote of thanks was given the essayist and the paper was, on motion of Dr. Fischer, accepted as a contribution to the Society.

A motion to adopt an amendment to the by-laws to comply with the annual assessment of the State Society was carried over for final action next meeting.

Dr. J. Palmer Matthews reported and showed a case of hip joint disease of two years' standing treated by the X-ray. A report on the case by the bacteriologist of the State Board of Health was read, saying the exudate from the sinus contained no tubercle bacilli. The prognosis of an ultimate recovery was good.

Dr. E. A. Bleuler was elected to represent the Society at Rock Island in May at the State Society and was instructed to vote for the endorsement of Dr. Pettit, of Ottawa, as secretary of the State Board of Health.

The Society then adjourned.

MERCER COUNTY MEDICAL SOCIETY.

Regular meetings are held at Aledo, quarterly.
Membership 25.

Officers.

President.....H. S. Allen, New Boston
Vice President..H. H. Sherwood, New Windsor
Secretary-Treasurer..V. A. McClanahan, Viola
Board of Censors—J. W. Ramsey, Aledo; T. C. Hainline, Seaton; Walter Miles, Viola.

The Mercer County Medical Society held the annual meeting in Aledo May 9, 1905, with the President, Dr. C. W. Carter, in the chair. Although the day was very stormy, the attendance was good, about twenty of the physicians of the county being present.

It was decided to hold only two meetings annually hereafter, instead of four, as formerly, the two meetings to be held in May and October and the May meeting to be considered the annual meeting.

Drs. G. H. Moore of Joy, B. R. Winbigler of Seaton, Matthew O'Haver of Millersburg were elected to membership in the Society.

Officers were elected as above for the ensuing year.

Dr. C. W. Carter was elected delegate and Dr. A. N. Mackey alternate to the meeting of the State Society in Rock Island.

The Society listened to carefully prepared papers on **La Grippe** by Dr. J. W. Ramsey and **Pneumonia** by Dr. I. E. Burnette. The papers were enjoyed and freely discussed by the members.

The address of the retiring President, Dr. C. W. Carter, was on **Ethics**, and was very instructive. It was decided that the Society furnish its members with a copy of "The Principles of Ethics" of the American Medical Association.

Dr. M. G. Reynolds gave a resume of the matters of interest to the medical profession that came before the last session of the legislature. Our Society is honored in having one of its members in the legislature and we feel that we could have no more worthy and able representative at Springfield than Dr. Reynolds.

A resolution of thanks to Dr. Reynolds for his efficient work in the legislature was introduced

by Dr. McMillan and passed unanimously.
Society adjourned to meet in October.

MORGAN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Jacksonville the second Thursday of each month.

Membership 12

Officers.

President.....J. W. Hairgrove, Jacksonville
Vice President..Josephine Milligan, Jacksonville
Secretary-Treasurer...D. W. Reid, Jacksonville

The Morgan County Medical Society met in regular session Thursday, May 11, at the Public Library; present, 19 members.

The minutes of the April meeting were read and approved.

Dr. A. J. Ogram of Jacksonville was elected to membership.

Dr. C. E. Black spoke of the non-attendance of members outside of the city. He suggested that following the plan of some other societies we might have a special visiting committee to visit and hold meetings in remote parts of the county.

Dr. Wakely said he thought the Society's action in changing the time of meeting from afternoon to evening could well be taken as an invitation for outside members to stay away.

Dr. Reid said that the average attendance, while largely confined to the city members, had greatly increased since the time had been changed from afternoon to evening.

Several bills were presented and ordered paid.

Dr. Milligan reported for her committee that the Morgan County Society had been formally affiliated with the State Society for the Prevention of Tuberculosis.

Dr. Pitner reported the death of the "Osteopathy bill" in the General Assembly, together with the contributory causes leading to its demise.

Dr. Baker reported at length for the committee appointed to investigate the city ordinances of Jacksonville, and to suggest changes that should be made to bring them into line with medical progress of the present day. He said the present ordinances were drafted years ago and that they were quite deficient in many respects. He said they were out of harmony with legislation on the subject, that there was in reality no such a thing as a board of health in Jacksonville, and no provision for quarantine of contagious diseases. The subject of quarantine was discussed at length, and the assertion made that the word "quarantine" does not appear in the city ordinances. He said the duties of a board of health were exercised by the health warden.

After considerable discussion, on motion of Dr. Pitner, the committee was continued, with instructions to prepare suitable amendments to the city ordinances for the consideration of the Society at its next regular meeting.

Dr. Chas. Cole read a paper on **Albuminuria**, and Dr. William Percy Duncan read a paper on **Foetal Endocarditis**, with specimens. A synopsis of these papers is given below.

Dr. C. E. Cole read a paper on **Albuminuria**, with special reference to what is often falsely called functional or physiological albuminuria. The writer would make the microscopic examination secondary to the gross examination of the patient and the 24 hours urine. He would drop the terms functional and physiological, and recognize the presence of albumen in the urine as evidence of a pathological process or condition somewhere. He desired to show that an albuminuria does not always indicate a kidney lesion, but that it does indicate a pathological condition somewhere, while the absence of albumen does not preclude the possibility of a nephritis.

Having begun with the end product, urine, and having found that it contains albumen, we must reason backward to find the source; the albumin itself being of no practical importance. It is of sufficient diagnostic importance, however, to make us ask, Can a diagnosis of a pathological condition be made by the presence of albumin in the urine? Yes, it can, and in 95 per cent of all cases the particular lesion can be located.

In order to do this it is necessary to consider the patient in general, and the urinary tract in particular, from kidney to urethra.

The writer differentiated among the different sources of albumin in the urine, first, as to the source; whether serum albumin or from blood or pus entering at any point of the urinary tract, giving information as to the nature of the pathological condition; second, as to the origin or location of the pathological condition, whether in the urethra, the prostate, the bladder or the kidney.

He made a report of three cases illustrating albuminuria of obscure origin, all of which responded to treatment, and at least apparently recovered from the condition causing temporary or transient albuminuria.

Dr. W. P. Duncan read a paper on **Foetal Endocarditis**, giving the post mortem findings in a case together with specimens showing valvular vegetations. The reader reviewed briefly the anatomy of the circulatory apparatus at birth, and the changes that take place shortly thereafter. Following are some extracts from his paper:

Usually the symptoms of congenital endocarditis are shown soon after birth. Of 128 cases, 85 showed in first month; 18 from one month to one year; 15 from 1 year to 16 years; and 10 after puberty. (Holt.)

Cyanosis is the most prominent symptom. The "blue baby"—color permanent or when crying. This is often the first symptom that calls attention to trouble. When this symptom is absent, cardiac disease is apt to be overlooked. The blue color may be slight, and only observed when there is severe crying or coughing. Later symptoms are dropsy and clubbed fingers.

In the absence of history of rheumatism, a murmur at the apex, a transmitted loud murmur at the base, cyanosis, enlarged right heart in a child under two years may be set down as symptoms of congenital rather than acquired disease.

The prognosis is exceedingly grave. Many

succumb with in a few days after birth; more than one-half during the first year.—(Anders.)

The specimen presented showed the result of a post mortem. The child, of a healthy mother, was delivered by a mid-wife. Labor, normal, easy; child's weight, $7\frac{1}{2}$ pounds. Child slow to cry, and cry feeble; cried little; slow to nurse. Restless in sleep. On second day child was darker when crying, and coughed somewhat. On third day had severe crying spell and apparently went to sleep; later was found to be dead. A postmortem was ordered and conspicuous among other cardiac, with their associated pulmonary changes, was the condition of the right auricle, which was filled with clotted blood, and a piece of polypoid vegetation, size of the end of the thumb, was wedged in the tricuspid valve, attached by a slender base to the valve, causing sudden death.

PEORIA CITY MEDICAL SOCIETY.

Regular meetings are held in the Observatory Building, Peoria, on the first and third Tuesdays of each month. Membership 77.

Officers.

President Dr. J. C. Roberts
First Vice President Dr. E. E. Gelder
Second Vice President Dr. B. M. Stephenson
Secretary Dr. W. R. Allison
Treasurer Dr. Jeanette Wallace
Member of the Board of Censors.....Dr. A. J. Kanne

Meeting was called to order by the president, Dr. J. C. Roberts.

Roll call showed the following officers present: Roberts, Gelder, Stephenson, Allison and Lucas.

Minutes of the previous meeting read and approved.

Dr. Lucas reported that the applications now in the hands of the Board of Censors were to be reported by Dr. Green. The latter gentleman was unavoidably detained from being present.

The Secretary announced the death of Mr. Kanne, father of our fellow member, Dr. A. J. Kanne, and moved that a committee of three be appointed to draft suitable resolutions expressing the sentiment of this Society. The Chair appointed Drs. Allison, Probst and Sidley a committee of three to write the resolutions.

The President introduced the essayist, Dr. F. B. Lucas, who read a paper on **Flat Foot; Its Recognition and Treatment**. This paper showed much care and study in its preparation. The discussion was opened by Dr. Roskoten, who complimented the reader and gave some personal experiences. Dr. E. L. Davis made a few remarks, after which Dr. Lucas closed with a few statements.

Dr. Roberts at this time introduced Dr. R. L. Baker (Coroner), who gave a detailed report relating a reported abortion recently committed, which was freely discussed by some of the members.

Resolutions adopted by the Peoria City Medical Society relating to the death of Dr. Kanne's father:

Whereas, Death has removed from us a valued citizen and father of our esteemed colleague, Dr. A. J. Kanne.

Be it resolved, That the Peoria City Medical Society express to Dr. Kanne our sympathy, and that these resolutions be spread upon the records of our Society, that future generations may know that we took due recognition of our fellow member when in sorrow.

Nothing further was brought before the Society and it was moved that we adjourn.

Number of members present was 22, as follows: Roberts, Lucas, Gelder, Hanna, Fourter, Roskoten, R. L. Baker, E. L. Davis, Sedgwick, Heald, J. S. Miller, S. M. Miller, Sidley, Bain, Webber, Barbour, Cooper, McFadden, Wulstein, Stephenson, Eckard and Allison.

PIKE COUNTY MEDICAL SOCIETY.

Regular meetings are held quarterly. Membership 32.

Officers.

President T. W. Shastid, Pittsfield
Vice. Pres. F. Marion Crane, Pittsfield
Sec'y.-Treas. R. H. Main, Barry

At a meeting of the Pike County Medical Society held on April 27th, at the office of Dr. H. T. Duffield in Pittsfield, the following members were present:

H. T. Duffield, F. M. Crane, W. W. Gay, L. J. Harvey, T. W. Shastid, Wm. E. Shastid, R. O. Smith, R. J. McConnell, J. Smith Thomas and R. H. Main.

Visitors present, Dr. Carl E. Black of Jacksonville, and Mr. E. W. Baker of Barry, Ill.

Minutes of the previous meeting were read and approved.

The names of Dr. J. E. Miller of Pittsfield and Dr. H. C. Loveless of Griggsville were presented for membership. By a vote of the society the by-laws were suspended and both applicants were elected to membership.

The above officers were elected for the ensuing year.

Dr. Harvey Dunn of Perry, was elected an honorary member of the society.

Dr. W. W. Gay addressed the society on the subject of **Amoebic Dysentery** of which, he stated, he had had a number of cases and had, himself, been afflicted.

All the cases had been treated successfully by washing the colon with solutions of quinine sulphate.

Dr. R. H. Main also reported a case of **Amoebic Dysentery** which he successfully treated in the same manner, with the addition of large doses of sulphur by stomach, after the method advised by Dr. S. Flexner.

Dr. H. T. Duffield addressed the society on the subject of **Measles**. This subject was thoroughly discussed as there has been an epidemic in this county recently.

Dr. F. Marion Crane read a paper on **The Pernicious Effects of a Continuous Excessive Protein Diet in Infancy**.

Dr. Carl E. Black of Jacksonville addressed the society.

Dr. L. J. Harvey was appointed delegate to the State meeting.

VERMILION COUNTY MEDICAL SOCIETY.

Regular meetings are held the second Monday of each month in the city hall, Danville, at 8:30 p. m. Membership 71.

Officers.

President.....F. N. Cloyd
Vice President.....S. L. Landauer
Secretary-Treasurer.....C. E. Wilkinson
Board of Censors—H. F. Becker, Joseph Fairhall and Benj. Gleeson.

The Vermilion County Medical Society met in regular monthly session in the council chamber, May 8, 1905, with President F. N. Cloyd in the chair.

The minutes of the April meeting were read and adopted.

Members present: H. S. Babcock, H. F. Becker, E. E. Clark, F. N. Cloyd, E. B. Coolley, Benj. Gleeson, D. V. Ray, Theo. Regan, M. Sahud and C. E. Wilkinson.

The essayists for the evening, Dr. T. E. Walton and Dr. W. J. Brown were not present so the society did not have any paper for the evening.

After explaining that he would be unable to present his paper on **Summer Diarrhoeas in Children** at the June meeting, Dr. Coolley made a motion that the papers by Drs. Walton and Brown which were due for the (May) meeting be presented at the June meeting. The motion received a second and carried.

Dr. Coolley reported cases peculiar to a tract of country about fifty miles square along the Snake river that are termed "Spotted Fever" by the physicians in that community. Under proper treatment which depends principally on the free administration of calomel, most every case recovered.

After this the subject of "Milk Fever" was brought up for discussion and some interesting experience was related.

The society adjourned to meet the second Monday evening of June.

WABASH COUNTY MEDICAL SOCIETY.

Regular meetings are held at Mt. Carmel, quarterly. Membership 18.

Officers.

President W. B. Moon, Belmont
Secretary J. B. Maxell, Mt. Carmel

The Wabash County Medical Society met April 25 and enjoyed a most interesting and valuable time.

Dr. J. H. Tanquary, Professor of Orthopedic Surgery of Barnes Medical College, St. Louis, was present and gave a very interesting and scientific paper on **Tuberculosis and Tubercular Arthritis**. This was discussed by nearly all present.

The following were elected officers for the ensuing year:

Dr. R. J. McMurray, St. Francisville, President; Dr. S. W. Schneck, Mt. Carmel, Vice President; Dr. J. Schneck, Mt. Carmel, Treasurer; Dr. G. C. Kingsbury, Secretary.

The Society instructed the President and Secretary to write to the senator and representatives from this district and request that they

vote against the bills now pending in the legislature regarding the changes of laws governing the medical practice, as such will tend to lower the medical standard, and subject the people to unscientific and dangerous treatment.

We hope for a very useful year in our Society, and will meet again the third Tuesday of July.

WASHINGTON COUNTY MEDICAL SOCIETY

Regular meetings are held at Nashville on the second Thursday of April and October.
Membership 13.

Officers.

President.....J. J. Troutt, Nashville
Vice-President.....R. A. Goodner
Secretary.....David S. Neer
Treasurer.....S. P. Schroeder

The Washington County Medical Society met in regular session at the Socialists Hall, Thursday, April 13, 1905.

The following members were present: J. J. Troutt, S. P. Schroeder, R. A. Goodner, J. F. White, R. B. Jack, W. D. Carter, R. E. Vernor, F. C. W. Obert, D. S. Neer.

Minutes of last meeting was read and approved. Society then proceeded to the election of officers for the ensuing year which resulted in the choosing of the above.

The society was then favored with a very instructive and interesting paper on **Diabetes Mellitus** by Dr. S. P. Schroeder in which he related the history of several cases that he had met with in his practice. A general discussion followed which was participated in by Drs. Goodner, Troutt and Carter that brought out many ideas on the subject of real practical worth.

There being no other papers to present, a "Round-the-Table" talk upon various topics of professional interest was engaged in by all present and proved to be not the least valuable feature of the meeting. Several pledged themselves to prepare articles to be read at the next meeting.

Society then adjourned to the second Thursday in October, 1905.

State Eclectic Society.

The Illinois State Eclectic Medical Society held its annual meeting at Peoria May 16, 17 and 18. A resolution was passed providing that all teachers in eclectic medical colleges should be graduates of eclectic schools. A banquet was held at the National Hotel which was attended by 70 guests.

The officers elected were:

President—H. E. Whitford, Chicago.
First Vice President—F. W. Range, Roseland.
Second Vice President—Ethel Richardson, Quincy.
Secretary—W. E. Kinnett, Peoria.
Treasurer—W. B. Matthew, Blue Mound.
Corresponding Secretary—W. T. Pollock, Chicago.

NEWS NOTES.

The German Hospital, 754 Larrabee street, of which one Burmeister is superintendent, has been under investigation for some time because of the death of a patient about a year ago. It is charged that the patient was given a dose of lysol instead of beef peptonoids. Nearly every reputable member of the staff has resigned.

The coroner's jury of Peoria county on May 10 brought in a verdict against Dr. Parker of Peoria and his assistant, John Peattie, for the death of Mrs. Spellman Calhoun of Averyville. The charge is murder caused by a criminal operation. Both men were committed to jail without bail.

The bids for the John Warner Hospital at Clinton have been opened and the contract will soon be let. The hospital complete will cost \$20,000.00.

A daughter was born to Dr. and Mrs. Guy Dowdall of Clinton, June 3.

Eight physicians recently located in Decatur during one week.

Dr. Chas. Patton has located in Springfield.

Dr. Walter Hodges has located in Hillsboro.

Dr. P. W. Monroe of Franklin, Ind., has located in Springfield.

Dr. W. A. Kirby is postmaster at Chestnut.

Dr. G. F. Meade was elected mayor of Pinckneyville, at the last election.

Taylorville is making a move for a city hospital. Maj. Wm. F. Van DeVeer has donated a site and given money for this purpose.

Dr. John B. Murphy has resigned the chair of surgery in the Northwestern University and has accepted the same position at Rush Medical College.

Dr. Lucien Coley of E. St. Louis has moved to Pittsfield and will practice medicine in partnership with his father-in-law, Dr. C. H. Doss.

Dr. E. K. Lockwood of Virden and **Dr. W. W. Van Wormer** of Girard, have gone to Baltimore for a post-graduate course.

Dr. R. S. Cowan of Girard has gone to Tennessee to visit the scenes of his boyhood.

Dr. John Denby of Carlinville with his brothers Chas. and Walter has purchased the Palmer farm near that city, of 615 acres for the sum of \$22,000.00.

Dr. Frank Buckmaster has returned to Altamont to practice his profession.

Dr. J. W. Pettit of the Consumptive Colony at Ottawa, has gone to Colorado and New Mexico to study the hospitals for the treatment of consumption, located in those states.

High Temperature.

"Your temperature is pretty high this morning," said the doctor.

"I hope it's no higher than I can afford to have it, doctor," said the cautious patient.—Yonkers Statesman.

Marriages and Deaths.

MARRIAGES.

Gilbert Fitzpatrick, M. D., to Miss Agnes M. Wyman, both of Chicago, June 1.

Frank B. Harmison, M. D., Chicago, to Miss Sylvia Powers, of Peoria, Ill., April 26.

Philip C. Hay, M. D., Chicago, to Miss Helen Davis of Oshkosh, Wis., May 3.

J. C. Hall, M. D., Decatur, to Miss Clara Turpin of Oreana, Ill., May 3.

Albert F. Henning, M. D., Chicago, to Miss Mary B. Meager, of St. Paul, Minn., April 26.

Ralph E. Jennings, M. D., Chicago, to Miss Edna G. Gill of Warsaw, Ind., April 23.

L. A. Jones, M. D., to Miss Eva May McElhiney, both of Alton, at Murphysboro, June 7.

John C. Outhet, M. D., to Miss Gertrude C. Paul, both of Chicago, at Rockford May 5.

Louis E. Schmidt, M. D., to Miss Marie Mansfield, both of Chicago, June 1, 1905.

Robert Conover Wilson, M. D., to Miss Louise Crepin Hoyt, both of Chicago, April 26.

Wm. M. Young, M. D., to Mrs. Edith Blinn Cosby, both of Lincoln, May 14.

DEATHS.

Jared Bassett, M. D., Albany (N. Y.) Medical College, 1839, died at his home in Evanston, Ill., May 10, from pneumonia, aged 91.

William H. Brown, M. D., Illinois, 1893, of Butler, Pa., died at his parents' home in Brown-dale, Pa., May 21, after a long illness, aged 42.

William Wallace Burns, M. D., University of Louisville Medical Department, 1843, a member of the American Medical Association, twice president and three times mayor of Polo, Ill., for 27 years a member of the local school board, commissioned surgeon in both the Mexican and Civil wars, one of the oldest and most prominent practitioners in northern Illinois, died at his home in Polo April 18, from senile debility, after an illness of several weeks, aged 83.

J. T. Easley, M. D., Staunton, May 11, aged 51. Dr. Easley was prominently identified with the profession of Montgomery county for many years.

James J. Giltenan, M. D., Cincinnati College of Medicine and Surgery, 1867, of Chicago, for a long time connected with the Department of Health as medical inspector, died in Alexian Brothers' Hospital April 20, after an illness of several weeks, aged 62.

Thos. B. Gordon, M. D., Missouri Medical College, St. Louis, 1889, formerly of Mechanicsburg, Ill., died at the Illinois Central Hospital for the Insane, Jacksonville, April 10, after an illness of several years, aged 42.

Adolph Hoffman, M. D., Jenner Medical College, Chicago, 1896, died suddenly at his home in Oak Park, Ill., April 13, aged 78.

Louis F. Hollands, M. D., Wheaton, Feb. 21, aged 63.

James M. Hutchinson, M. D., Chicago Medical College, 1867, one of the three first internes to be appointed to Cook County Hospital, died at his home in Chicago May 6, from paresis, aged 62.

Pierre A. Marks, M. D., naval surgeon during the Civil war, Chicago, May 12, aged 61.

George W. Marshall, College of Physicians and Surgeons, Keokuk, Iowa, 1873, died at his home in Lima, Ill., April 28, from cerebral hemorrhage, after an illness of one week, aged 81.

Israel A. Powell, M. D., Years of Practice, Illinois, 1900, for more than 40 years a practitioner; a member of the legislature in 1871; collector of internal revenue for the Eleventh Illinois district under President Grant; one of the organizers of the first medical society in the Wabash valley, died at his home in Homer, Ill., May 1, from senile debility, after a long illness, aged 79.

George C. Raynor, M. D., New York University, New York, president of the Will County (Ill.) Medical Society for several terms, died at his home in Joliet, April 23, after an illness of three weeks, aged 79.

Herman Schroeder, M. D., Cleveland Medical College, 1850, died at his home in Bloomington, Ill., April 7, from heart disease, after an illness of five years, aged 84.

Courtney L. Smith, M. D., Rush Medical College, Chicago, 1879, died at his home in Aurora, Ill., from labioglossopharyngeal paralysis, April 15, after an illness of several months, aged 47.

Streeter, John Williams, M. D., Chicago, at Lake Forest, Sunday, June 4, age 64.

Dr. Streeter was for many years the most prominent homeopathic practitioner in Chicago and for a long time conducted the Streeter Hospital. He was connected with the Illinois National Guard and was a veteran of the Civil War.

Leander L. Tidball, M. D., University of Michigan Department of Medicine and Surgery, Ann Arbor, 1874, died suddenly at his home in Monticello, Ill., from heart disease May 19, aged 58.

WANTED.

Copies of the February, 1905, Illinois Medical Journal, 10 cts a copy will be paid if sent to the Editor, 522 Capitol ave., Springfield, Ill.

NEW INCORPORATIONS.

American Family Remedy company, Chicago; capital, \$30,000. G. H. Bunge, E. E. Bunge, C. M. Donovan, incorporators.

Obstetrical Appliance company, Illinois; capital, \$5,000; manufacture appliances; incorporators, I. C. Loose, John D. Mayes, R. D. Dugan.

The Illinois Medical Journal.

EDITORIAL OFFICE, 522 CAPITOL AVENUE, SPRINGFIELD.

Copy for advertisements must reach the editor's office by the 20th of the month in order to secure insertion.

PUBLISHER'S NOTES.

The Journal is not responsible for any medical or therapeutical views expressed in this department.

TREATMENT OF FRACTURED FEMUR THROUGH TROCHANTERS WITH AMBULATORY PNEUMATIC SPLINT.

By J. F. Presnell, M. D.

On the 10th of February I was called to see Mrs. Mathilda B. Carse, an elderly lady and a prominent resident of the city and founder of the Woman's Temple of Chicago, who had met with an accident and upon examination under anaesthesia, it was found that she had sustained a fracture of the right femur, through the trochanters. Consultation was called, my diagnosis confirmed, and the Buck's extension apparatus agreed upon. After several days trial of this arrangement, I became convinced that this form of treatment was not suitable to the case.

Mrs. Carse is a large woman, of athletic physique, who has always led an active life. To be confined in bed was so depressing and irksome to her nature, that it added to her suffering and also very greatly to the prognosis of the case. In view of this, some other form of treatment was absolutely necessary. The ambulatory pneumatic splint was brought to my notice and I determined to give it a trial. I was more than pleased, after getting the splint adjusted, to find that the shortening had been overcome and that the pain and discomfort was almost immediately relieved. We got her out of bed and stood her on the floor. Then she was put back to bed and had great comfort in being moved about in bed. The splint was opened, at first twice a day and later once a day, for massage, bathing and readjustment (the splint was not removed or taken off, but merely unbuckled).

At the end of the first week she was again taken out of bed and stood on her feet. This was repeated every week, until in the fourth week she began walking every day. At first she only got up once a day, after a few days it was extended to twice a day. After the eighth week I removed the hip-joint immobilizing attachment from the splint, after which she was able to get up with the aid of her nurse at any time she wanted to. The splint was dispensed with entirely at the end of the tenth week.

Frequent measurements were taken and it was a source of very great satisfaction to know that no shortening or deformity had taken place. During the daytime considerable traction was applied by simply adjusting the splint; this would be eased up at night, enabling her to rest easy. She made a journey to New York at the end of the twelfth week. At this time she was able to walk across the room without the crutches, but was not encouraged to do so. She used her crutches for a little time after this, but I do not know for exactly how long. She returned to the city in the fall, walking as straight as an arrow and without crutch, cane

and without a particle of limp. In view of the foregoing facts, I am very favorably impressed with the treatment of this class of cases with the ambulatory pneumatic splint. Its perfect adaptability is such that it has a wide field of usefulness and it gives more comfort to the patient than any other splint or method I have used.

ANTIKAMNIA.

(Therapeutic Indications.)

Antikamnia is an American product, and conspicuous on this account and because of the immense popularity which it has achieved, it is today in greater use than any other of the synthetically produced antipyretics. The literature is voluminous, and clinical reports from prominent medical men in all parts of this country, with society proceedings and editorial references, attest its value in actual practice in an endless variety of diseases and symptomatic affections, such as the neuralgias, rheumatism, typhoid and other fevers, headaches, influenza, and particularly in the pains due to the irregularities of menstruation. Antikamnia has received more adverse criticism, of a certain spiteful kind, particularly directed against its origin—and because of its success—than any other remedy known; critics have seemed personally aggrieved because of its American source, and that it did not emanate from the usual "color works," but their diatribes have fallen flat as do most persecutions and unreasonable and petty prejudices. The fact stands incontrovertible that Antikamnia has proved an excellent and reliable remedy, and when a physician is satisfied with the effects achieved he usually holds fast to the product. That is the secret and mainspring of the Antikamnia success. It is antipyretic, analgesic, and anodyne and the dose is from 5 to 10 grains, in powder, tablets or in capsules taken with a swallow of water or wine. When prescribing Antikamnia, particularly in combination with other drugs, it is desirable to specify "in capsules," which are rice flour capsules, affording an unequalled vehicle for administering drugs of all kinds.

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I want to sell my practice and office building with fixtures; practice amounting to \$2,500.00 cash, with nice office building of 3 rooms, in a splendid town of 700 in the best agricultural section of Southeastern Illinois; price, \$600.00. A bargain to a good man wanting a general practice among a prosperous people. Will introduce the buyer. Have a McDannold operating chair, good as new, cheap. Address A. X., care Illinois Medical Journal.

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Review of the Report of the Anaemia Commission Upon Hoopworm Disease in Porto Rico.

In February, 1904, the United States Government appointed a Commission for the study and treatment of anaemia in Porto Rico. This Commission has now submitted its report to the Governor of that Island. This report covers over 200 pages, and is printed both in the Spanish and in the English language.

The Commission was composed of experts in their special field, and the amount of work accomplished by these gentlemen, and the exceedingly painstaking manner in which they attended to every detail of the subject, stamps this inquiry as one of the most scientific and thorough investigations ever undertaken in the cause of public health.

As early as 1899, Dr. Bailey K. Ashford, who later became a member of this Commission, discovered the parasite *ankylostoma* in the feces of anaemic patients who were then crowding the field hospitals of Ponce. This was the first positive evidence that the disease in Porto Rico known as *anaemia*, was not the ordinary form, but *ankylostomiasis* or *uncinariasis*, produced by the parasite sucking the blood, and so prevalent did this disease become during the ensuing years that fully ninety per cent of the population became affected.

When the Commission appointed by the United States Government began its investigation in Porto Rico, it established a hospital consisting of tent wards, first at Bayamon, and later at Utuado, the most anaemic districts of the Island. The object of the treatment was first to remove the parasite, and then to cure the anaemia.

To kill the parasite, thymol, malefern, and betanaphthol were given, but the preference was for thymol. First the patient received a purge of salts, and then on the following day he was made to fast until one o'clock and then was given thymol in doses not exceeding four grammes; then another purge was given to remove the bodies of the parasite killed with the antiseptic. The purpose of the first purge was to clear the intestines of mucus, etc., so as to allow the thymol to act. The thymol and purge treatment was continued once a week until the feces showed no more *uncinaria*.

While thymol kills the parasite and the purge remove them from the intestines, also diminishing the amount of toxine in the system, these

remedies only clear the field for a reconstructive process in the blood which is needful to restore to health the extremely anaemic patient.

Iron was given in the severe cases of anaemia.

Pepto-Mangan (Gude) was the only proprietary remedy reported by the Commission, the other remedies used being pharmacopoeial preparations. That over eighteen pages of the report should be devoted to cases treated with Pepto-Mangan, proves the high regard in which the Commission held this preparation, and establishes the unrivaled clinical value of Pepto-Mangan (Gude) in one of the severest forms of anaemia—that of *uncinariasis*, or miner's anaemia.

In reading the report of the Commission, the unbiased character of the work stands out clearly, and yet the results obtained point so distinctly to the supremacy of Pepto-Mangan (Gude), that even if numerous other records were not available, proving the therapeutic value of this remedy, this report alone would suffice to establish Pepto-Mangan at once as the foremost haematinic known. The eighteen cases in which the Commission used Pepto-Mangan (Gude) in the treatment of *uncinariasis*, were selected on account of their extreme severity, and thus these cases represent the most crucial test to which any iron preparation can be subjected. The results obtained with this treatment were extremely gratifying. In nearly all of the cases we find such notes as these: "Excellent condition. Completely cured, etc.; while the difference between the low percentage of haemoglobin (some cases showing only 11 per cent) and the low count of the red cells at the beginning of treatment with Pepto-Mangan, and the nearly normal findings at the conclusion, affords convincing proof of the efficacy of the medication.

A noteworthy fact is that none of the patients showed any digestive disturbance after the administration of Pepto-Mangan, although the remedy was used for many weeks in each case. When we remember the extremely low state in which most of these patients were found on admission, and the fact that several suffered from gastro-intestinal symptoms incident to their disease, this detail is by no means to be underestimated.

The observations of the Commission were made under Government control, and therefore the report may be regarded as a supreme test, and the efficacy of Pepto-Mangan in one of the severest forms of anaemia is proved beyond a doubt.



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